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# MIND

A QUARTERLY REVIEW

OF

PSYCHOLOGY AND PHILOSOPHY.

# MIND

## A QUARTERLY REVIEW

OF

## PSYCHOLOGY AND PHILOSOPHY.

EDITED BY

PROFESSOR G. F. STOUT,

WITH THE CO-OPERATION OF PROFESSOR E. B. TITCHENER, AMERICAN EDITORIAL REPRESENTATIVE, AND OF DR. E. CAIRD, PROFESSOR WARD, PROFESSOR PRINGLE-PATTISON, AND OTHER MEMBERS OF AN ADVISORY COMMITTEE.

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MIND

A QUARTERLY REVIEW

OF

PSYCHOLOGY AND PHILOSOPHY

## I.—NON-PHENOMENALITY AND OTHERNESS.

By Hubert Foston.

Perhaps philosophers tend to confine themselves too much to the extremes of being. We are so eager to contribute, if we can, to the reconcilement of the conflict between unextended mind and matter as extended, that we have little attention for anything whose special interest lies in its being perhaps neither properly mental nor purely material. But I could fancy an epistemologist, habitually immersed in considerations of the mind, and a metaphysician, with some especial leaning to reflexion on the mysterious nature of the *ding-an-sich*, merging their meditations to considerable advantage in the united contemplation of a growing flower. The metaphysician might perhaps say at first that here non-mental being, coming into an organised unity of its own in itself, showed its independent substantiality in the strongest form: and yet might presently confess that something in this focussing of being into an inner unity seemed akin to, and prophetic of, mind. The epistemologist, while insisting that our recognition of the plant as living was essentially a reflexion of our own living consciousness, might yet mark—with a rather suggestive effect on his views of the possible substantiality of some environment for mind—the plant's facing of an environment that seemed real on the same terms as itself.

Of course the flower, thus contemplated, proves nothing. But it suggests much. It tellingly reminds us of the ambiguous relation which mind seems to hold to the order of things—at once contemplating the varied scale of being as a

mere fact of its own consciousness, as something which can even be supposed to be everywhere its varying projection and reflexion of its own nature; and finding on the other hand, as it ascends the scale, a new significance breaking out in the varying stages—interpreting them as adumbrations of its own nature, and eventually finding a place for itself as a crowning *part* of the scale!

If, indeed, the graded scale of being be nothing but the mind's own ordering of its own facts, it seems very remarkable that it should spontaneously place itself amongst them, and naturally class itself as part of the wider scheme.

With just this allusion, however, to the broader aspect of the situation, I wish to introduce a review of some natural hints, of a more confined—and psychologically more fundamental—character, in which it seems to me that mind declares itself as a limited and partial form of being, a form of being with a *beyond*. It appears, I confess, to make its declaration in terms which it is difficult to get over, and hazardous to disregard.

## I.

Springing up, presumably, to meet some intellectual and social need, we find in common use the word "reality". Probably we can none of us trace how it came to have for us the meaning which it has. In myriad suggestive utterances of it by those who had themselves grown up into the social consciousness of its use before us, we have been hearing it from childhood: and without, perhaps, being able distinctly to say, in the form of definition, what it means to us, we are able to make use of it in the confidence that we mean by it what is generally meant. So when I say that an object is real, I presume that the word freshly awakens in me the notion of some peculiar aspect or character of my consciousness of objects to which the occasions on which I have heard the word used have helped to link it in my mind.

Now it is not easy to say what this peculiar consciousness is, or through what kind of experience our common need of such a word came to be felt. And in a matter so evasive and subtle, definition would be attempted at great risk. I think it safer, without any preliminary definition, which might be misleading through one-sidedness, and adversely disturb the mental equilibrium, boldly to *experiment* directly with the word itself. In doing this we shall simply assume that the word probably is an expression of *some* subconscious meaning, we cannot off-hand say what, and that it is capable, in

use, of exciting the associated meaning in subconsciousness.[1]

In approaching the oft-repeated attempt to analyse the meaning of reality with reference to objects, I do not know that any apology is required for making reference to facts that may be very familiar, and in not altogether novel connexions. Philosophy must not weary of re-statements, provided that they are at any rate *re*-statements.

If, then, we look at an object, and assert to ourselves—without any clear theory yet of what we mean by the assertion—that "it is real," we shall probably agree that we excite in ourselves such a provisional attitude to the object as gets some immediate confirmation in laying hold of it. And it is a natural inference which has been drawn, that the judgment of reality in reference to visual presentations is based on a revival of the experiences in laying hold. But then, laying hold involves a complex of experiences; and it still remains to discover whether the notion of reality attaches itself to (or identifies itself with) one characteristic of it rather than another.

## A.

Examination of my own experience does not lead me to exalt the importance of touch. I have looked at an object, trying to give rein to my uncritical belief in reality, and have then gently applied my hand. Strange!—the touch-sensation has come in upon my mind with something like a surprise: it has seemed, so to say, an irrelevance. But let me take a firm active grasp of the object—the handle of an ewer, for example—and the situation is quite otherwise. The judgment I had formed and encouraged in my mind by assuring myself of the "reality" of the thing seems to be lost in immediate confirmation.

But then, the touch-sensation has intensified through the activity. Is that, in itself, for the purposes of our inquiry, a critical change? Another experiment, the circumstances of which will not, indeed, admit of any throwing of touch-sensation into the same definite relief of irrelevance, may still yield a confirming verdict as to touch in an intenser form.

I place my hand in a flat wooden joinery vice, so that I can increase the intensity of touch-sensation either by the screw or by voluntary muscular pressure. Now believing

[1] I am not using the word in its deeper and darker sense—only in contrast with the upper-level consciousness in which we know clearly what we are thinking about.

the subconscious constituents of the notion of reality to be capable of excitement by the sound of that name into the social use of which I have been initiated by I know not what untraced paths, I endeavour to excite it—for whatever it is worth—by saying to myself the actual words, "It is real!" If I do this while attending to the pressure of the tightened screw, the words do not, so far as I can judge, find any certain *point d'appui* in the experience. If, however, I repeat them under less pressure from the screw, made up for by active pressure against the wood, the awakened notion seems with peculiar certainty to ally and identify itself with the exerted pressure.

The notion, then, which we express by the word would appear to have grown up out of some experience intimately related to, or even identified with, active experience, rather than out of passive touch, whether slighter or intenser. And if touch be of special importance at all, it must be through combining with that experience, and so modifying it as to have helped to produce the essential result.

I do not discern that the experience stands in need, for this purpose, of any such modificatory assistance. I now find that I have only to move my forefinger, for example, strenuously up and down, my eyes being closed, to get the characteristic importation into consciousness of the notion of the existence of a point of reality in the world. If the process goes on, this point seems to stand out in a certain separated illumination of reality, while all the remaining contents of the world I hear about me might have degenerated relatively into phantasm. If I do but contract the opposing muscles without movement, the same result crystallises. I actively induce a similar rigidity in my whole arm. I find any attempt to conceive the world as "unreal" more massively contradicted in a correspondingly widened area.

I may interpolate the remark that when we find those properly phenomenal marks of distinction by which we distinguish percepts from images—as vividness, definite local relation, freedom from fluctuation—we *anticipate* such scope for overt activity as images never afford: and consequently these marks make a peculiar nascently rousing appeal to our active nature. It is these marks *as thus appealing*, not these marks as they could be contemplatively taken in themselves, I suspect, that go to account for the characteristic shape in which we credit percepts with a superior reality as compared against images. Hence the brimmed completeness of actuality to which the presentative differences, if taken *simpliciter*, may be felt hardly to answer.

A weird experience connected with cerebral anæmia, and conditions of exhaustion, seems to afford this view some confirmation. One finds oneself in the state of living painfully, and as it were insecurely, in a world of half-realities, in which the conception of subjective idealism seems so hideously true that the thought of it almost makes one's consciousness reel. And, however one's sense-experiences may be affected by the condition,[1] the world one lives in does not seem sufficiently at fault with respect either to visibility or tangibility to account for its apparent unrealising. It is true that what dims one's sense-experience—as twilight—may sometimes help to bring on this effect, *given* a condition of exhaustion: but that the state is not then directly due to any affecting of sense-experiences in themselves seems proved by the fact that mere dimming of sense-experience, in normal conditions without active exhaustion, has not the slightest tendency to induce it. I am disposed to attribute the unrealising simply to the failure of the active consciousness to respond to sense-appeals—a failure naturally more marked when the appeals are obscured and muffled.

## B.

Now if these various facts were admitted to have the bearing which has so far been assigned to them, their interpretation would yet remain ambiguous with reference to a distinction which has not been, perhaps, always duly observed. There is left over what is, to my mind, the most critical question of all. The notion which we express by the word reality might have grown up out of some experience more closely connected with activity than touch is, or it may have arisen directly out of the active experience itself. This is the extremely subtle question which we shall now have to release as well as we can from its obscurity and its entanglement.

I say its entanglement. For it is not only naturally a very difficult question, but it has been placed in unnecessary confusion by the admission into psychology, where unguarded phrases are capable of working so much disaster, of the phrase, "*sensations* of resistance".

Now if there *is* a properly active consciousness involved in human experience, it surely is aroused markedly in the case

[1] I am inclined to think, for one thing, that there is a difficulty, in this condition, in bringing the eyes to quite the nice focus of normal life. For there is a tendency for them to slip out of focus in inattention; and also when they are brought attentively to bear on objects there remains a slight effect somewhat as of seeing through glass.

of what we call resistance. And when we have spoken of sensations of resistance, we seem, in that phrase, to have taken due note of the consciousness as a whole. The very presence of the word resistance, suggestive as it is of active impulse, causes the phrase to answer to our consciousness of activity, and wards off the sense of its having been neglected. Nor has it. It has been unwittingly betrayed: which is worse.

Those who do not believe in a *sui generis* active consciousness will allow that if the denial of it is justified, it ought to be made without the surreptitious aid—of course unnoted—of a confused appearance not of denial but of sufficient recognition. But those who hope to see activity recognised as a distinct and cardinal fact of consciousness—I shall try to show a little authorisation for such a hope presently—have not the least obstruction to fear from a curious habit in psychology, of retaining the terms of activity while the treatment as seriously active has faded or failed under their very sound—and (strangest of all) by actual aid of their own compensatory suggestiveness!

Now to illustrate this paradoxical method of stewing terms dry in their own juice, in the case of "sensations of resistance". The impulse-stirring word "resistance" supplies such a saving flavour of active suggestiveness to it, as to harmonise the phrase more or less with conscious fact. Then this active suggestiveness is stultified at once in a verbal identification with sensational consciousness. But how was it declared to us that our experiences of resistance were just sensations? I do not know: any more than I know how we get dispensation to smooth out a strong antithesis by a contradiction in terms. For surely the profound antithesis in our experience between quality and activity lies beyond, and outside the range of, such varieties as we find dividing between sensible qualities themselves. Surely it remains a fundamental incomparability, not to be reduced flatly to line with them by the stroke of one inconsiderately comprehensive word—sensations! We should by this time be sufficiently familiar with the broadened basis that we have won in psychology, not to assume that every kind of apprehension is necessarily reducible to the sensational type.

It should be made clear that all this does not involve the least quarrel with the idea of *muscular* sensations—though I must leave it to others to decide the rights or wrongs of the physiological reference—so long as it is understood that by muscular sensation we mean no more than a certain order of experience that is associated with our active experience, but

is itself relatively passive. As sensation it may afford passive notes or marks of changes that have been completed through activity—in fact, of now *actualised* changes. To such tokens of attained organic state, whether precisely muscular in reference or no, from a physiological point of view, the distinctive word sensation properly applies. But I do not think, as I shall presently show, that they do more than contribute a properly sensational *constituent* to the complex experience in cases of resistance. And even were we to suppose any more active consciousness entering into resistance to be as closely dependent on these sensations as, according to one theory, pleasure and pain are upon presentational conditions, such close dependence would not, in either case, warrant identification. We should still be no more right in speaking of sensations of resistance than in losing the fact of feeling in sensations.

C.

Having now protested against the confusion between sensational and active consciousness, we are in a position to raise definitely the question whether the notion of reality aroused on occasion of our exertion of activity is most likely to be connected with the sensation named muscular, accompanying any properly active consciousness in the case, or with a pure active consciousness itself. This is a question which no experiment possible under normal conditions can decide; since we cannot isolate the muscular sensation from any active consciousness there may be. We have to resort to hypothesis, making as sure as we can that we are dealing with a *vera causa*.

I do not see how we can account for the "otherness" which appears to be an essential element in our notion of physical reality, through any characteristic that I am aware of in my own sensations. The real object, as I call it, does not commend itself to me for real *as* a part of my experience —though it be that, too—but emphatically as other than I, and so real in itself. It seems to us—whatever we may think about the seeming, philosophically—to lie ambiguously within and without experience. I think this is something that may be best explained through a certain cardinal and constant characteristic of our active consciousness.

To bring this characteristic evidently to light, let us widen our basis.

To begin with, I think we require a consciousness of activity to explain our notion of an unattained end. An end

is, from a phenomenally contemplative point of view, a fact already in consciousness—a representation. But not so does it possess its force and meaning *as* an end. Nor does its direct relation to feeling explain why it should possess special force and meaning just because it can be ambiguously regarded as a fact *not* in present consciousness, but only wanted in some consciousness not yet given as present. No characteristic difference between presentative and representative experience, between percept and image, no pure emotional delight or discomfort through the character of the representation, seem to avail to explain the peculiar projection outside present experience that gives an end its life as such. Nor does supposedly passive reference to time explain it, if, as I suspect, we implicate the very same fact in our notion of time.

Suppose it to be said that an end owes its peculiar aspect simply to its being a fact looked upon as involving an interposed process of serial change. Do a number of presentations ever become to us a process except by our reading something into them from an active consciousness? How is the sum of the phenomena gathered up into the notion of process, if not by reading one phenomenon as standing in a continuous transcending relation to another? And to what psychical basis other than a consciousness of activity are we to refer our notion of a continuous transcending? There is no explanation, I suspect, of either end *or* process, without implicating that peculiar expanding self-transcendence of a given content which is shortly describable as activity; and psychologically this means that there is no explanation of our notions of them without reference to our own conscious activity.

Upon the whole question so far, I conclude that the transcending of a presented content of experience—the starting from it to enter into relation with what may at the moment be ambiguously regarded as at once within experience and without it—is a characteristic of an active consciousness. Activity makes a part of conscious experience itself to consist in what is recognised as relation to the unexperienced. Perhaps the paradox arises from the fact that we are trying to express intellectually what is not intellectual (but active), and not subject to the law of intellectual forms.

## D.

We have hitherto been marking how the mind assumes active relation to what is not in experience, or at least is

comprised in experience only ambiguously and incompletely as a represented ulterior end. Our next question, in approaching consideration of the bearing of this relation upon the case of resistance, is: have we any reason for supposing that activity necessarily maintains an implied relation to some not-in-experience when that not-in-experience is not even represented? I think we must say that a relation we cannot help interpreting in this way if we are to interpret it at all, is indefeasibly characteristic of conscious activity in whatever form or context we find it.

When activity is found in that relation in which it becomes attention, it is surely a pressing on after the not-in-consciousness, so as to actualise it in consciousness. Now it may be allowed that we keep up our attention to a complex fact whose details we want to observe, partly by help of continually offered and corrected imaginative suggestions of what the details may be proved, through the work of attention, to be.[1] But I believe too much may be made of this, and the essence of the process of attention consequently evaded. The essential effort in attention is to get hold of *undisclosed* perceptual facts, whose attraction lies in the way in which, when disclosed, they authoritatively dispose of, or confirm, the representative suggestions. What we seek by the activity called attention is *unknown* perceptual fact in that decisive aspect in which it differs from our representations. Essentially, we seek what, in its effective nature, we never can picture before it comes to be.[2] So that activity aims beyond the given, independently of any possibility of intellectual representation of its end or goal.

## E.

Now the peculiar duality, the "otherness," which is an element in what we deem the reality of things, seems far more likely to be explainable by reference to the nature of an active consciousness which is found maintaining ulterior aim even when the matter of that aim is quite undefined *a priori*, than by any kind of sensation whatever. And it may be noted in the end that it tends to explain on equal terms, not

[1] I grant that complication of my case, because I believe it often holds good. I suspect that there are simple cases of attention, in which the essentials of the process appear very little complicated by imaginative suggestion: but I have not risked my reasoning by basing it upon any postulation of them.

[2] This is most clearly brought out in the case of attention. It will be found true, actually but more latently, in regard to the kind of case considered in C.

simply that otherness of objects from the body, which has been theoretically derived from feeling-relations, but that profound otherness in which we reckon the body, as object, to be other than the perceiving mind or self.

It should be remarked that the conscious activity entering into what is called resistance is not properly described, from a psychological point of view, as checked. The serial course of muscular sensations is checked, of course; but if what we ultimately recognise as obstacle involved the checking of the psychical activity, pressure would fail at once. Psychologically, to say that resistance involves checked activity should mean that the experience of resistance discouraged or prevented exertion, and so far kept activity from coming into the case at all. As a matter of fact, what we have in well-developed experience of resistance is activity fully and energetically maintained.

Now I suggest that this activity still carries with it, from its very nature, the *implicit* positing of undefined end or goal of tendency. But if in the case of pure attention we can see that the end sought is never given as a represented end, in this case no end is ever actualised at all. It remains as an ulterior $x$, not merely in ambiguous relations to present consciousness, but never positively conscious at all. The ulterior pole, so to say, of the activity, remains simply implied *as* the necessary pole of the activity, neither represented, nor ultimately defined, nor any way known. So that, by our very constitution, there is inevitably introduced into the case a "we know not what" which we should hardly venture, with Locke, to call a "something" at all.

In sum: The constant implication of the presence of active consciousness seems to be that a given attained or actualised present consciousness does not constitute a whole complete in itself. The implication seems to persist where, as in attention, the implied complement is markedly not representable. Its persistence when, as in the consciousness we name by "resistance," there is no clear *what* else at all, is appealed to for explanation of our notion of objects as somehow retaining positiveness even when regarded in a negative relation to our consciousness.

It will be observed that I have not said that we assume a second activity in the thing, opposed to our own. Such a theory, with which I have no quarrel, presupposes rather than explains the otherness, which I have been seeking to account for directly from a consideration of the nature of activity as we find it in mind. I fear, indeed, that in trying to write psychology I have slipped into metaphysics: but my aim

has been to keep as close as might be to my experiential base.

## II.

Let us now turn to quite another side of mental life.

When thought construes experience on a basis of causation (which I have tried in a previous article to exhibit as its really specific function),[1] we supply unperceived links between points of perceptual experience. When, for example, I drop a stone into a dark well, and presently hear a splash, or see a man struck, and his skin redden, I may supply links not perceived between the two perceived facts. These links, however, as derived from other and completer chains of presentative experience, I may regard as having been perhaps[2] conditionally *perceptible*, though not actually perceived—that is, I supply them as being facts such as *might* have arisen in perception under certain conditions favouring actual perception.

Thus, though the supposed facts were never *actually* phenomena in perception, I conceive them as somehow phenomenal in their nature. And yet only ambiguously can I conceive them so.

Let it be noted that we are, of course, supplying suggested phenomenal links in the form of *images*. These constitute all the properly *phenomenal* links that we insert or suppose between the two incidents that were given in perception.

But these imaginative phenomena do *not* translate the unperceived facts, in which we believe as members of the causal scheme, or links in the causal order, into simple phenomenality for us or for our thought.

For, in the tentative exigencies of thought, the imaginative suggestion of linking-series frequently has to take indeterminately alternative forms, or even multiple forms; while yet we never believe the actual unperceived order of events to have been anything but one determinate chain. When I see a machine, once working smoothly, break down, and am left imaginatively to propose, with practically equal belief, a variety of series (mutually incompatible) of causal links between the two states, evidently none of my imaginative phenomena can be taken as radical equivalents of the supposed once conditionally perceptible links in the case. And what other phenomena have I in the matter? Unless we can

[1] See MIND, N.S., vol. xv., No. 60 (October, 1906), "The Constitution of Thought".

[2] "Perhaps"—because one may have suggested the wrong links.

suppress our thinking function, we seem committed to a belief in facts that we are never able finally to state to ourselves in any properly and definitely phenomenal terms whatever.

I have adverted to the fact that we always believe the actual order of unperceived facts to have been a determinate chain. And whatever may be the ultimate grounds of this belief, it gets support from the process of thought. We constantly find that where at first a variety of imaginative explanations seemed feasible, determinative evidence can in the end be found to narrow down our belief as to the actual course of events to one determinate line.

When this has come about, it may be said that our imaginative phenomena are reduced to final correspondence with our belief about the unperceived facts of the case, and become their sufficient phenomenal representatives. But mark how it does come about.

Our new evidence consists of what we call "traces" left by the supposed unperceived course of events. These traces consist in certain causal issues,[1] which its successive links happened to have *aside* from, and additionally to, their issues that led directly on to the second of our two perceptual experiences. Thus, an automobile that we perceived standing in one town, and, some hours later, perceived running through another town, followed one of three possible roads to get there, but incidentally left its unmistakable tyre-marks by the way. We chance to walk back by this same road—or, to resume our general statement: Perception may subsequently strike the lines of these causal side-issues. From the now perceived phenomena, the manner in which we are to imagine the nature of the links that were not perceived may be settled. That is, we determine, on evidence, what phenomena we suppose there *would* have been for us, had we had opportunity to perceive them.

The result is that we seem to ourselves to discover, in the end, the *pre-conditions* of our second or final percept—conditions which were *quite non-phenomenal* for us at the time when the percept arose. We thus find the natural procedure of thought suggesting to us a fundamental conditioning of

[1] Known for such through actual perceptual experience in other cases, arising at other times. We may partly state as follows the kind of situation we have in view: We perceive initially A, and finally B. We have often perceived aforetime the succession A-*a*-*b*-*c*-*d*-*e*-B, and also the successions A-*g*-*h*-*i*-B, and A-*x*-*y*-*z*-B. But we have also often perceived such successions as *a*-*p*, *b*-*q*, *c*-*r*, *d*-*s*, *e*-*t*. Presently in this case we find *p* . . . *r*, *s* . . . and explain the total occurrence as A-*a*-*b*-*c*-*d*-*e*-B.

| | | | |
*p*-*q*-*r*-*s*-*t*

our experience by facts not experienced: and positing for the facts of sense a basis in what never was, and never became, actually phenomenal.

Thus it comes about, also, that every percept we have is capable of being taken in a double relation, referred as it were to two worlds, and counted twice over, as Berkeley complains. From one point of view we find (1) our own percept—the element in our closely continuous, and in one sense self-complete, perceptual history: from another we find (2) just that part of the wider causal world which we now perceive —a member of that order of things which only coincides at points such as this with our actual experience, and which seems to be replete with events ever going on independently of our subjective cognisance of them, but needing, at our peril, to be taken into the account of provident thought.[1]

These are considerations, I confess, which appear to me to be forced on us by the very examination of the function of thought: and I suspect that the philosophic thought which attempts critically to transcend them must all the time be proceeding on causal assumptions of exactly the same type as those which lead to them. But that is a matter which cannot be fully argued here.

What we observe at present is this: That while activity seems essentially to posit in object an inaccessible point of tendency, beyond experience; thought, on different lines, inevitably supplements bare phenomenal experience with the postulation of a sphere consisting largely of non-phenomenal being never coming within experience.

## III.

It remains to refer to a non-phenomenal element *in* experience; bearing powerfully upon our belief in otherness, in a way that has no basal connexion, so far as I see, with the psychical causes already assigned for such belief. That profound and most important fact of life called feeling is, I submit, never given as a phenomenon: and constrains us to belief in existence beyond, with a force quite unaccountable so long as we attempt to think of it as a phenomenon.

I am not quite prepared to accept Dr. Ward's position that we do not know feeling:[2] since, were I discussing the subject fully, I should be inclined to contend that the presence of the words "pleasure" and "pain" in language indicates that feel-

[1] If they are not, *experience* is apt to take an unnecessarily disagreeable line: thus seeming to be a dependent part of the causal system.

[2] *Encyclopædia Britannica*, vol. xx., p. 44, Art. "Psychology".

ing has some aspect to self-conscious intellect, which we have to accept even if we cannot trace or explain it; and that our psychological attitude to feeling only proves the inadequacy of the conceptions and definitions of knowledge that were formed when that attitude had not yet been taken, nor its epistemological bearings realised.

But I certainly cannot assure myself of anything to be called phenomena either of pleasure or pain.

A.

It is perhaps worth while to pursue the question in some detail, not confining ourselves to the minimum of statement absolutely necessary for the purpose of our argument. Perhaps the argument, indeed, would seem insecurely supported by any bald and summary statement, in a matter of such subtle intricacy.

I find, then, that I can steadfastly contemplate some presentation or phenomenon, and have no question of the fact of accompanying pleasure. But when I try to observe the pleasure, I do not seem in the least to know what I am looking for. So far as I am able to judge, it refuses all such penetration of its secret as much as if it were not a fact of mind at all.

Moreover, I find the significant doubt unexpectedly suggesting itself, whether the pleasure of the moment has not ceased to be connected with the sensation, and changed to a scientific pleasure in the exercise of the capacity for introspection! I say, a significant doubt—though it be hard to settle it by fixed observation. For such it appears, when followed by the reflexion that pleasure is probably, then, always a fact of the most strictly subjective life. As soon as we psychologically objectify the experience in which the pleasure was given—as we must, to scrutinise it—it seems as if the pleasure had been given in it only while the experience was merely subjective: and shifts to the new subjective experience of *introspecting*. And if one could satisfactorily objectify even that, and watch one's very psychologising, one suspects that the feeling (in one sense so evasive, and in another and less sophisticated sense not in the least evasive, but *the* fact of whose nature we are most directly and unequivocally aware) would simply glide back into the subjective region again!

And I find no phenomena of pain.

At first blush, we appear to have no difficulty—nay, much less than we should choose—in observing pain. But it is wonderful how, so long as we can support and direct upon

the observable elements of our experience that degree of attention which makes the various procedure in an afflicted part of the body stand out for the moment with map-like distinctness, experiences of a kind that we seem to have been taking for the very pain itself can be picked out—and the pain is not just there! It is natural enough that attention should fix on the definite sensations attending our distress: and probably it is useful for therapeutic purposes that we should normally be thinking of these phenomenal *aspects* of the whole woeful state when we speak of our "pains". That we should mistake them for very pain itself has no immediate ill-consequence in the way of practical danger—the evil comes in when we let this mistake direct our *theory*.

Where intense sensation and much pain are together, as in the crisis of a protracted dental operation, without anæsthetic, one may not find it possible to distinguish off sensation, psychologically mastered and marked, from pain as an indefinite residuum. But the closest attention that I have succeeded in giving to my own sensations under such circumstances, while presumably bringing the *phenomena* of the case into enhanced impressiveness, seems to have the effect of reducing the consciousness of pain.

When, in a throbbing, painful gum, I have attended to the throbbing as it were in abstract analysis, the throbbing has been in a degree pleasure-attended. The accompanying sense as of pressure over a small area, if not pleasure-attended in quite the same simple way, must probably, as a phenomenon of which I am for the moment an interested observer, be reckoned as so far pleasurable. Yet it seems to be a prominent constituent of a complex of sensations that would probably, when not under discriminating attention, fuse together in what would be called an *ache*.

This last phenomenon is probably nearly allied to that degree of sensation which we sometimes do not call directly "painful," but rather "inconveniencing," and which is disagreeable as *impeding our pursuit of the interests of life*. On exposing, say, a cheek of neuralgic tendency to a cold wind, such experience deepens on into what we should directly call painfulness: but even then, with close observation, one seems able to mark off what one took at first for the very "pain" as so much intensity of sensation, leaving yet in the background a strange evasive somewhat—as it were a dolorousness discouraging life (how else shall I put it?), haunting us, but inaccessible to observation.

Returning to the psychological Eldorado of my unfortunate gum, I find, besides, distinguishable keener experience, which

I cannot by any effort dissociate from pain. I notice that this kind of experience (in this case appealing to the imagination with a strong and intimate, if indefinite, suggestion of lesion) somehow hints a threatful interference with normal conditions—curiously *unconfined* in its threatfulness. And, so far as I can judge, this aspect is regularly present when our sensations have that simple, and as it were inherent, "painfulness" that prevents our marking them off as so much distress-attended phenomenon. I find from notes made immediately after suffering what was probably the worst stage of a sharp attack of serious illness, that a sense of apprehension, bound up in curious intimacy with the consciousness of one's bodily frame, accompanied by a present *crushing and bringing to nothing of one's vitality*, seemed to flash up as the essence of the matter.

When I have observed all I can, it appears to me that there remains a terrible region of mysterious threat to my living being, that I cannot prevail upon myself to face attentively. I confess, though it may sound rather unscientific, that I am disposed to believe that reflexion on this unconfinedly threatful characteristic points us about as straight towards the unobservable, and of course unthinkable, heart of the matter as we can turn. But when that aspect develops, I simply lose the attitude of an observer of phenomena. I find myself shocked into becoming a living being, with living interests that make all speech of "phenomenon"—of bare, impenetrable appearance—utterly inapplicable.

Upon the whole, so far as I succeed in approaching a painful state in an observing phenomenalist spirit, the impression of pain, I think, recedes from it altogether. But on the other hand, so far as the pain seriously persists, I do not think I can take up a phenomenalist attitude to it at all.

## B.

Generally speaking, feeling is from the standpoint of observation made out to be something less than phenomenon: it is in truth incomparably more than phenomenon. Pleasure and pain are never to be picked out from amongst the elements resulting from an analysis of the contents of life: but they rather exist to bring meaning to bear upon them. And agony or delight that is verily ours sweeps us, in the very fact of its existing, out of our region of non-committal contemplativeness, in which we talk of "phenomena," into one in which we have to take deep breaths of a totally different atmosphere. Nor is it that feeling is phenomenal and some-

thing more: for the more-than-phenomenal, the hyper-phenomenality, is just the element that feeling contributes to our complex experience. And consequently, to treat feeling in the same temper in which we treat phenomena amounts to pseudo-science. If there is to be any science in the matter —and I think there is—it must be science with a temper changed from that in which it appears in physics, or even the psychology of the intellect. The effort of psychology to be scientific is apt to take the form, if I mistake not, of assimilating itself to other sciences on which it is really a material advance. But science must intensify its tone, or falsify its matter, when it comes here. For otherwise it is doubtful whether we can truly be said to have feeling under consideration at all.

My remarks, then, upon the nature of feeling amount, in the present connexion, to a plea for the inner humanising of science when it touches the inner secret of human life. A science of feeling that is not imbued with feeling is worse than useless—it is misleading.

Of its witheringly dangerous tendency practically, I will not say more than to observe that if I could utterly commit myself to regarding human feeling in the light of some kind of pure phenomenal being, I should, for what I can see, have become utterly brutal at heart. My business now must be to call attention to one remarkable theoretical effect of the emasculated treatment of feeling—that it drops out of view the peculiar character of the power with which feeling forces upon us the belief in existence beyond ourselves and outside our own experience—now in the form of belief in the actual existence of other "subjects".

## C.

For it is when, getting away from the contractions which attend thought about phenomenal being—at once fallacious and paralysing as applied here—we allow ourselves to dwell upon human life as a life of feeling, that we touch a ground of irresistible strength in our belief in the real existence of *men*, plurally, and not merely of some single subject such as we each call "myself".

We surely find, for example, in keenly appreciating what it must mean for a man to be hurt that it grows impossible to dream of chancing his subjective non-existence. Psychology, indeed, shows his subjective existence to be, from an intellectual point of view, a quite unverifiable postulate. And if we regarded one another as so many systems of (analogically

not improbable, but unobserved) *phenomena*, we might be argued into laying more practical stress on the problematical character, from the point of view of each of us, of one another's existence. But our *feeling* for others, and essentially for others *as feeling*, turns all this into mere trifling. It is, at least in part, through the hyper-phenomenal interest of our relation as feeling beings that the vital energy of our belief in one another—of our belief, that is, in existence outside our own experience, in the form of other subjects—is maintained.

It must be observed that this is not by any means a mere case of feeling influencing belief by chancing to ally itself with some representative phenomena rather than others, as it so often does. It must be completely distinguished from these cases, with their common demand for logical rectification. It has to be realised that the case now before us is one in which our whole poignant consciousness of what feeling *is*, is concerned: and that it is here pressing upon us, with the entire weight of its essential being, a sense of the unspeakable risk at which our belief in other feeling-consciousness than our own would be surrendered. Against this there is, of course, such *logical* shadow of risk as must, on the other hand, attend acceptance of our instinctive inference of the actual presence of feeling answering to our own in others. But this relatively unimpressive risk is by nature quite incommensurable with the former, and can hardly be felt beside it as more than the mere phantasy of a risk.

Hence we may perceive the importance of dropping inadequate quasi-phenomenal notions of feeling, and entering into its hyper-phenomenal character, if we would set ourselves free to realise for theoretical purposes the singular specific energy which our belief in otherness here naturally acquires. If we will do this, we may see that we shall try in vain completely to treat and test the conviction by such methods as are applicable to beliefs that refer simply to supposed conditionally perceptible or phenomenal facts. The real life of the conviction, as hidden in the very nature of feeling, can never be exhibited in any logically prepared version of its grounds which we can subject to the ordinary methods of logical criticism. The very quick of our belief in otherness will always remain here inaccessible to probing examination. Ever necessarily stronger in its nature (we cannot tell by just how much) than any grounds of it which we can logically approve or dispose of, the conviction will abide behind all, when the last has been said, practically unalterable from its primitive function as an instinctive, uncritical belief.

And indeed, when we do attempt to weigh the belief philosophically, why should our philosophy neglect the signifi-

cance of the undeniable existence of feeling amongst the totality of facts?

It may not be possible to read in the facts now considered any assurances sufficiently positive to satisfy our latent philosophic ambitions of objective certainty. But one result of such an attempt to trace our belief in otherness to its ultimate natural sources may be an impression of the philosophical hazard involved in theoretically overruling, or discounting, impulses so integrant to mental procedure as these.

From a practical point of view, the hazard is evident enough. To dismiss the belief in otherness, if we could, would be to destroy the existing basis of our social life and existence. And if it be said that philosophy has nothing to do with such practical considerations, the hazard is perhaps quite as great, in its way, theoretically. Mental impulses organically bound up in the structure of knowledge as we have it, cannot be theoretically set aside without by implication transforming mind into a "something, we know not what," with a vengeance—or possibly rather into a nothing, that could not consistently be. When we treat mind empirically, we surely know that we are dealing with something at least sufficiently self-consistent to exist and to know: whether the theoretical residual mind on whose supposed dicta we might seek to base a purified philosophical belief, by excluding the tendencies leading to those natural mental verdicts we have considered, would be so self-consistent, and whether, if we could see what it was, it would look like a reasonable basis for a philosophy, or for anything else but a game with somewhat arbitrary rules of its own, is another matter.

For my part, I am better prepared to transcend myself, so as to believe in otherness, on the lines I find given in my mind, and cannot dissolve out of, or exclude from, mental function, than to attempt to transcend myself by *theoretically* changing the nature of mental function as I can neither *actually* change it, nor consistently conceive it changed. And it is not surely, after all, from a pure subjective point of view that objectivity is ever brought in question, but from some problematical point of view that *never can* (at least for us as we now are) *become* subjective.

In these matters, indeed, one cannot ask for scientific verification: but one's position seems only rendered doubly precarious by trying critically to rearrange the data in some other form than that in which they appear to be continually given in mental processes, and in mental habitudes that lie deeper than any refinements of theory.

## II.—IMMEDIACY, MEDIACY AND COHERENCE.[1]

By the Editor.

The distinction between mediate and immediate knowing seems to me to be of vital importance to the theory of knowledge. But there is one sense in which this distinction may be understood which I regard as founded on sheer fallacy and confusion. In order to make my own position intelligible, I find it necessary at the outset to set aside as entirely alien to my own way of thinking this illusory use of the terms *mediate* and *immediate*. I refer to that doctrine of the mediacy of knowledge which is presupposed in the methodological scepticism of Descartes. It may be called the doctrine of "representative contents". It is what Reid assailed under the title of the "ideal theory". According to this view there intervenes between reality and the knower a very peculiar kind of entity called "a content". This content is supposed to have no being except what is constituted by its appearing in consciousness or being present to consciousness. Its being is merely being-for-thought. Hence the content is often simply called a thought or a part of knowledge; the implication here is that we do not think or know reality directly but only our "thought" or "knowledge of reality". Again, it is sometimes asserted that we can only know things as they *appear* to us; and this is immediately confused with the statement that we cannot know the things themselves but only their appearances. Thus the curious result is obtained that the things themselves do not appear at all; it is only the enigmatical entities

[1] The present article is primarily concerned with certain questions suggested by Mr. Joachim's book on *The Nature of Truth*. But it is also intended to prepare the way for a discussion of Pragmatism and of the position represented by Mr. Prichard in his article on "Knowledge and Psychology". In my anxiety to clear the ground for further discussion, I have set down explicitly much which I should myself take for granted, if I could assume that it was also effectively taken for granted by others. This is my apology for what may seem to the reader a tedious elaboration of truisms.

called their appearances which appear. Why do not these appearances require to be represented by yet other appearances?

Of course, I do not accuse the upholders of this doctrine of gratuitous absurdity. They have apparent reasons for their view which no doubt are very deceptive. What they are misled by is the existence of error and of constructive imagination. A man may believe that the earth is flat, although in reality it is round. In such a case it would seem that there must be a mental representation of the earth being flat, to which the reality does not correspond. Similarly I can imagine a centaur though no centaurs exist. Now, it seems plain, if we are to admit contents of knowledge as distinguished from the content of reality in cases where the distinction is forced upon us in this fashion, we are logically bound to assume a similar distinction in all cases, unless there are special reasons to the contrary. Thus, the logical view seems to be that all knowledge is mediated by representative contents.

This conclusion is partly suggested and in part is sustained by conceptualist and nominalist theories of Universals. If all that has real being is merely "particular" or "singular," then the "common nature" shared by members of a class cannot be real. But we certainly appear to think of it. Hence, it must be a mere "content of knowledge" mediating between the knowing mind and reality but forming no part of the reality.

It is error, therefore, and the play of fancy, and universal concepts which give to the theory of representative contents whatever plausibility it may possess. If these can be otherwise explained, this theory becomes a gratuitous absurdity. But *can* they be otherwise explained?

I believe that they can. The crux of the whole problem lies in the theory of Universals. "Conceptualism" is at the root of the whole difficulty. Conceptualist and nominalist theories, when reduced to their lowest terms, are found to involve the assertion that particular existences do not in reality share in a common nature but are merely thought of by us as sharing in a common nature. Now it is of course true, that there is in reality no such thing as a "horse in general"; but then no one is capable of mentally representing or thinking of a "horse in general". No one can think of a particular horse which is also the nature common to all members of the class "horses". The class universal is not a "horse in general," but what we call the "nature of horses"; and this is just as essentially an aspect of reality as

the particular existence of this or that horse. It is essential to a particular existence to be a particular *instance*. Abolish particular existence and you abolish the universe; but the universe is equally annihilated if you abolish all that we call community of nature between particular existences. To suppose *absolute disparity* between A and B is to cut off all other possibility of relation between them. All other modes in which the unity of the universe is manifested presuppose that ultimate, unique and irreducible form of unity which we ordinarily name as the possession of *common* character or attributes.

Now, if it be once admitted, that class universals, such as redness, human nature, fluidity, etc., are not merely "representative contents" having being only "for thought," the same must also hold good for what we call "possibilities". The most general verbal sign that we use in mentally considering a possibility as such is the conjunction "if"; and the ultimate meaning of "if" depends on the meaning of the alternatives in a disjunctive proposition. "A horse is either white, black or brown, or some other colour." These are alternative possibilities. In order to indicate that we are selecting one of them for special consideration, we use the conjunction "if". The hypothetical (*e.g.*, "if this horse were brown, it would be less beautiful") expresses a connexion of possibilities as partial aspects of the same total possibility. Now if this account of "possibility" is right, the being of possibilities is bound up with that of class-universals. If class-universals are not merely "contents" but belong to the nature of the real universe, the same is true of possibilities. For what we mean by a "possibility" is simply a development of what we mean by a class-universal. Given a general nature we find it intrinsically capable of being exemplified in certain ways, independently of its being actually exemplified in these ways. Given that men have stature, it is possible, relatively to this common attribute, that man may be fifty feet high. This, no doubt, from another point of view, is an "impossibility". But this is due to other conditions and not to the nature of the common or general attribute "stature". Possibility or impossibilities are never absolute, but are always relative to certain class-universals, and they have the same kind of being as the class-universal to which they are relative. They enter into the constitution of the universe on the same terms as class-universals. A pane of glass is brittle even though it never will be broken. The possibility of a stone impinging on the glass is implied in the general nature of panes of glass and of

stones as things movable in space; the possibility of the glass being broken is connected with this as part of the same total possibility: the total possibility thus constituted is expressed by saying that "the pane of glass is brittle". That this account of possibilities is not merely arid scholasticism becomes evident when we consider how the nature of actual things is, so to speak, saturated through and through with possibility. Glass is brittle, fusible, transparent, hard; gold is malleable, soluble in *aqua regia*, of a certain specific gravity, etc. Matter is impenetrable, mobile, etc. A man is wise, benevolent, quick-tempered, etc. All these adjectives express ways in which things behave or would behave, *if* certain conditions are or were fulfilled.

If it is once admitted that logical possibilities enter into the constitution of the known reality, and are not "contents" having merely a "being for thought," we can, I believe, show that merely "representative contents" are not required to explain error or the play of fancy. When a man believes something, what he has in mind must at least be a logical possibility relatively to the *general* condition which he is considering. He can only believe what he mentally apprehends. But what he mentally apprehends must be logically possible. What is logically impossible is *pro tanto* not thinkable, and therefore cannot be believed. Now, in reference to any logical possibility which our thought apprehends, we may take up certain alternative subjective attitudes, called belief, disbelief, doubt, or mere imagination. These subjective attitudes do not alter the nature of the logical possibilities to which they refer. The same logical possibility may be an object either of belief, disbelief, or doubt. I may either treat it as a possibility that is actualised or as a possibility that is not actualised, or I may remain undecided between these alternatives. To treat it as actualised is to *behave* from a practical and theoretical point of view as if it were actual. It is to proceed as if we knew not the mere possibility but the correlative actuality. In so far as we "hedge" or make reservations there is not full belief.

Thus, error is possible inasmuch as belief outruns knowledge in the strict sense. So far as we merely believe without knowing, our belief is true inasmuch as it agrees with what we should believe if we did know; it is false inasmuch as it disagrees with what we should believe if our belief coincided with knowledge. But knowledge itself is not any kind of correspondence or agreement with reality. The knowing mind as such is in immediate relation not to

a "content" having being only "for thought," but to an object having a being and nature of its own.

It follows from this account of the matter, that mere belief, and consequently error, always presuppose knowledge. They are rooted and grounded in knowledge. Error presupposes knowledge of logical possibilities, and this again presupposes knowledge of a common nature in which particular existences share, and this again presupposes acquaintance with actual particulars which are instances or examples of a common nature.

The distinction between strictly knowing and merely believing does not imply that we separate off certain judgments as cases of pure knowledge excluding entirely the presumptive attitude which forestalls knowledge, and therefore excluding error. It may be that there are such judgments. But this doctrine forms no part of my present contention. Even if we cannot lay on the table any proposition as an indubitable instance of pure knowledge, we may none the less assert: (*a*) that every judgment contains an element of pure knowledge as the essential presupposition of the belief which outruns knowledge; (*b*) that what was previously mere belief becomes gradually displaced by knowledge proper as our experience grows in extent and coherence, the range of alternative logical possibilities being gradually more and more circumscribed.

The stricter sense of the term "knowledge" in which it is contrasted with mere "belief" or "opinion" is more or less recognised in the common usage of most civilised languages. Plato is the first to define it sharply in his distinction between ἐπιστήμη and δόξα. But if the term "knowledge" is thus restricted we need some other word which shall include the element of mere belief in our judgments as well as that of knowing in the narrower sense. For this purpose I propose *cognition* and the cognate words *cognitive*, *cognise*, etc. Besides this we may also, where there is no risk of ambiguity, use the knowledge and its cognate words in the wider sense *as well as* in the narrower.

The outcome of our discussion so far is that no knowledge is mediated by contents which have "being only for thought". In this sense of mediacy all knowledge is immediate. Mere belief may perhaps be said to be mediated by knowledge of logical possibilities; but the logical possibilities are not merely "contents of thought". They belong essentially to the real constitution of the Universe. Thus there are no merely representative contents, no ideas intervening between the mind and reality. It is the reality itself

which appears to us; it is not an appearance (or apparition) of the reality which appears. Cognition is a direct relation of the mind to the Universe.

None the less there is another sense in which cognition may be mediate. Though the cognitive relation in its own intrinsic nature admits of nothing intervening between the mind and reality, yet one bit of cognition may be mediated by another in the following way. It may be that without the cognition of P we should have no cognition of Q; yet if we have acquired the cognition of P in a way which yields no *in*dependent cognition of Q, we may in so doing acquire the cognition of Q. This is possible because P is known or believed, truly or falsely, to imply Q. I see, for example, an addressed envelope on the table before me, and I say, "Here is a letter for me". The existence of the envelope with my address is cognised with relative immediacy; the propositions that the envelope has an inside, and that there is a letter in it, and that this letter is for me are cognised mediately. The existence of the envelope is relatively a datum; that of the letter is for me only an implication of this datum. Again, if I grasp a man's hand in the dark, the presence of an arm and body continuous with the hand is cognised mediately. Through knowing the presence of the warm and active hand I know the presence of a human body to which it belongs; and I have no cognition of the presence of the body except as implied in the presence of the hand. Thus a cognition is mediate in this sense in so far as it comes to us through inference or in some way logically analogous to inference.

This being the meaning of mediacy, it is obvious that not all cognition can be mediate. To affirm that all cognition is mediate in this sense leads inevitably to a thoroughly vicious circle. If mediate cognition could only be mediated by cognitions which are themselves merely mediate, knowledge could never get a start. It is as if one should say that in building a wall every brick must be laid on the top of another brick and none directly on the ground.

The immediate element in knowledge is of two kinds. (1) There is the kind of immediacy which is exemplified by self-evident propositions in so far as they are self-evident. In such judgments as "what is included in a part is included in the whole," or "if some cows have horns and all cows have tails, then some animals with tails have horns," or "if two lines are equal in length to this footrule they are equal in length to one another," or "$7 + 5 = 12$," there is immediate apprehension of relation as founded in the nature of the terms related. All cognition of the implications on which

inference depends has this immediate character. In inference the conclusion is mediately known; but the connexion of premisses with conclusion is immediately apprehended. This kind of immediacy is of the utmost importance and deserves careful examination. But I must here pass it by and turn (2) to the immediacy of feeling. This is the immediacy which belongs to pleasures, pains, emotion, desires in so far as they are actually being felt by some one, and to sensations in so far as they are actually being "sensed" by some one. In it alone we have a direct apprehension of particular existents as they are at the moment existing; to it alone is due the meaning of such words as "now," "here" and "I". I may know *that* another person is feeling a toothache, but I have not the same kind of direct acquaintance with his toothache which I have with my own at the moment when I am feeling it. In the latter case I know the toothache itself, and not merely that it exists. Let us examine a typical example. I am, let us say, lying in bed and dropping asleep. Suddenly I am startled by a loud and prolonged sound resembling that which might be produced by the whistle of a passing train. In the whole previously acquired system of my knowledge there may be nothing from which I could by any logical manipulation have elicited the cognition that this sensation would emerge in my consciousness at this moment; even if I could have found grounds for anticipating it, I may not have attended to them; finally, if I did actually anticipate the occurrence of the sound at that moment, yet the actual hearing of it is not included in and does not issue out of the anticipation of it. It obtrudes itself on consciousness whether I anticipate it or not. I need no ground for asserting its presence because it directly asserts itself.

But in asserting itself, it also asserts more than its own being. It does not present itself in isolation as something self-complete and self-existent. From the outset, it is cognised as part of a system, having its existence only in relation to other parts of the system. The special context to which it belongs may be very vaguely apprehended. But the inquiring attitude expressed verbally in the question—*What is that?* presupposes that it has definite relations within a system even though I fail even tentatively to determine what they are. The initial question, What's that?—may be followed by a series of suggested answers: "It must be a passing train; but there are not trains near enough. It is a boy with a whistle; but it hardly sounds like that. It is a bird; but no bird screams in that way. It must be something the

matter with my ear or brain. I do not know what it can be."

Apart from interpretation, classification and description what is immediately given cannot constitute an object of thought at all. It is never an object by itself but only as part of a context. We have no means of defining it so as to draw a line of demarcation between it and its implication. This is impossible because in defining it we must describe or characterise it and because in describing or characterising it we must include its connexion with what is other than itself. If, for example, we ascribe to it any quality or attribute we in so doing regard it as an instance of this quality or attribute and therefore as sharing in a common nature with other actual or possible instances. This is involved in even recognising the qualitative continuity of a sensation in the successive moments of its duration. But just as it is impossible to separate the pure datum from its implications so it is impossible to separate the implications from the datum. The implications are implied by the datum. Apart from it they are not implications at all. That which is interpreted, described and classified cannot be resolved into its own interpretation, classification or description.

Let us next consider the logical significance of this kind of immediacy in the systematic development of knowledge. We often hear it laid down as an established common-place that the ultimate test of truth is " coherence with the system of our experience as a whole ". From our present point of view, this thesis cannot be accepted if it is taken to mean that the appeal to immediacy plays no essential part in the process of attaining truth and discarding error. The test of truth is complex, involving both coherence and immediacy as its essentially correlated aspects, neither of them being workable apart from the other.

Reverting to our example, let us examine the judgment— " This sound which I hear is made by a passing railway train ". Is the truth of this judgment logically tested merely by its coherence with the general system of our knowledge? It must certainly be admitted that the interpretation of my actual sensation is in part a development of previous cognition, and that so far as this is the case the test of its truth must be found in its coherence with the organised body of knowledge and belief. But, on the other hand, we must also insist that if the immediate datum did not itself admit and require interpretation, no interpretation of it would be possible. If it presented itself in self-complete isolation there would be no connexion between it and the preacquired body of cogni-

tion. Preacquired cognitions can be brought to bear on it only because by its own intrinsic nature it raises questions to which preacquired cognitions supply relevant answers.

That the sensation itself is presented independently of previous cognition, I have already pointed out. I have now to add that the interpretation shares in this relative independence. It is only *in part* a development of preacquired knowledge and belief. Previous experience could only yield the judgment: "Sounds of a certain kind heard under certain circumstances probably arise from passing trains". But this is not the judgment with which we are dealing. The sort of judgment required to explain the actual sensation is one affirming particular existence at a particular time and place; for example: "This sound has its source in a train which is now actually in my neighbourhood". The assertion of actual existence contained in this proposition is no way derived from previous experience. It is derived only from the immediately apprehended existence of the actually felt sensation.

Are we then to lay down the thesis that cognition of particular existence is due to immediate experience, whereas the *nature* of the particular existence is determined by the pre-existing system of knowledge and belief? A moment's reflexion will show that this position also is quite untenable. The sensation in its immediacy has a specific nature of its own which cannot indeed be cognised without in the same act cognising its relations to what is other than itself, but none the less cannot be resolved into these relations. And this specific nature of the sensation contributes to determine for cognitive consciousness the nature of its implication—the mode in which it is to be interpreted. The immediate experience differs in its nature according as the sensation is one of sound or of smell, or, if it be a sound, according as it is a rattle, a roar, a groan or a whistle; with these variations its implications also vary.

As regards the immediate datum itself there can of course be no room for doubt or questioning in so far as it really is merely immediate. If we could disentangle its pure immediacy from its implications so as to make it a separately distinguishable object and express our cognition of it in a distinct judgment, this judgment would possess infallible certainty. But this is impossible, and if it were possible it would be useless. It would not contribute anything to the development of knowledge because the resulting judgment would be completely isolated, leading to nothing beyond itself.

It is hopeless and futile to attempt to detach the pure datum from its relations to what is other than itself. But there is

another mode of procedure open to us. This is based on the distinction between nearer and more remote implications or connexions of the datum. One implication P is more remote than another Q when we cannot determine what P is without also determining what Q is, though we may determine Q while leaving P indeterminate. We may gradually approximate in our judgments to the certainty of the immediate datum by leaving undetermined the more remote implications and falling back on the nearer. We may thus narrow more and more the range of possible doubt until at last every opening for serious scepticism seems closed and we can only make a formal pretence of doubting. Consider the child's judgment: "I see the moon moving past the clouds". The judgment has its basis in an immediate datum in the way of visual sensation and this immediate element is beyond the reach of doubt. It is once for all fixed and the general system of cognition must accept the terms which it prescribes. The general system of cognition must preserve systematic unity by including and not by rejecting or ignoring it. But this does not mean that the judgment, "I see the moon moving," is beyond question. For this judgment in asserting the datum asserts also a certain interpretation of it and this may be called in question. Further, it is impossible to disengage the pure datum from what are regarded as its implications and to express it in a separate judgment. But it is possible to analyse the interpretation so as to distinguish more remote from nearer implications; it is possible when the more remote are challenged to take refuge in the nearer until a position is reached from which the further encroachment of scepticism may be more safely defied until at last full security is almost or quite attained. Thus we may substitute for the judgment, "I see the moon moving through the clouds," the more guarded proposition, "I see at least some change in the relative position of moon and clouds". If this is called in question we may approach still nearer to immediacy in the judgment, "A visual presentation which I call that of the moon and another which I call that of the clouds are changing their relative position within my field of visual sensation". Here, if there is any opening for doubt at all it is exceedingly narrow and could only be discovered by an extreme stretch of speculative ingenuity. A similar series of judgments approaching more and more to the certainty of the pure datum may also be obtained by analysis of the proposition: "The sound which I am now hearing is the whistle of a passing train". We may fall back step by step upon the following series of judgments each constituting a closer ap-

proach to the impregnable certainty of the immediate datum. (1) This whistling sound is due to some kind of mechanism and not to the vocal organs of any animal or human being. (2) It has at least an external source and is not merely due to conditions within my own body. (3) Whatever may be the conditions of its occurrence, it is at least a sound such as I associate with the whistle of steam engines. (4) At any rate it is a whistling sound as distinguished, for example, from a rattling, roaring, moaning, buzzing or whispering sound. (5) Whatever kind of sound it may be, it is at least a sound as distinguished from colours, odours, tastes or touches such as I may be experiencing at the same time. (6) Whatever its quality may be, this quality is recognisably similar in different moments of its duration.

There is then a sense in which the appeal to the immediacy of feeling yields a test of truth. But we must now hasten to add that it does not, taken by itself, yield the kind of test which we require. It does not, taken by itself, afford a test which can be used in the progressive *development* of knowledge. If we start with a doubtful proposition, it does not, of itself, enable us to make any advance towards removing the doubt. So far as the bare appeal to immediacy is concerned, conjectures will remain as purely conjectural, hypotheses as purely hypothetical as they are to begin with. It does nothing for the gradual displacement of mere belief by knowledge in the strict sense of the term. The utmost of which it is capable is to enable us to sift the complexity of our performed cognitions so as to distinguish their more doubtful constituents from those which are less open to doubt and perhaps to discover some which may fairly be regarded as beyond the reach of scepticism. It is a further drawback that the approach to certainty is purchased at every step by corresponding attenuation of content. When I assert that "what I hear is a whistling sound," this judgment is less open to doubt, but it is also correspondingly less important than the judgment that "what I hear is a whistling sound made by a passing train". If the second proposition is true, it contains more truth than the first.

The test of truth which is really operative in the development of knowledge includes an appeal to Coherence as well as an appeal to Immediacy. But Coherence by itself avails as little as Immediacy. The working test must include both as mutually complemental aspects.

The futility of mere Immediacy has been already shown. Let us now consider Coherence. Coherence as a test of truth rests (1) on the Law of Contradiction, and (2) on the

Unity of the Universe. According to the Law of Contradiction two incompatible judgments, in so far as they really are incompatible, cannot be combined in a single complex judgment. The attempt so to combine them results in a verbal formula which is not a judgment at all, but is mere nonsense so far as the incompatibility extends. It expresses no thought because there is nothing to think. The combination of words "X both is and is not Y" imitates the form of a statement, but it is not a statement because it states nothing. Thus, when in the course of our thought we are led to such a formula we must reject one or other of the incompatible judgments or so modify it that the incompatibility is removed. The application of the law of contradiction thus depends on the condition that two judgments are to be combined as constituents of one complex judgment. Unless they are to be thus combined there can be no question of their compatibility or incompatibility. But propositions form parts of one complex proposition in so far as they express different features or aspects of the same whole—the same total object of thought. Any connected discourse may be regarded as a single judgment having for its subject the whole topic to which the discourse refers—what in Logic is called the Universe of Discourse. Thus a narrative of the Adventures of Ulysses consists of a series of judgments interconnected as parts of a single judgment which has "the adventures of Ulysses" as its subject. The interconnexion is indicated by such conjunctions as *and*, *but*, *when*, *then*, *thereupon*, *because*, *therefore*, etc. The whole discourse may be introduced by the sentence, "The adventures of Ulysses are *as follows*," what ensues being merely a detailed development of what is meant by the predicate "as follows," and being therefore itself of the nature of a predicate. Now, if the Law of Contradiction is to be universally applicable, all judgments must be connected in this way. They must all be partial constituents of one complex judgment having one subject or "Universe of Discourse". It is here that the principle of the Unity of the Universe supplements the Law of Contradiction. Whatever is affirmed or denied in any judgment is affirmed or denied as a partial feature of the one all-inclusive whole—the total universe of being. Thus judgments which are true must be capable of being combined in one complex proposition, which may always be introduced by the words, "The universe is such that . . . The universe is such that men are mortal, and apples grow on trees, and Cæsar crossed the Rubicon, and things which are equal to the same things are equal to each other, and lying is a vice."

The development of cognition is the development of a single complex proposition, having the Universe for its subject. It follows that any two propositions, P and Q, that enter into the context of the all-inclusive complex must be either mutually compatible or mutually incompatible. If P and Q are incompatible, the result is nonsense and one of them must be rejected as false. But which? If P is true, Q is false, and inversely; but how are we to decide that P is true or that Q is true? Again, if we suppose P to be false, this does not of itself justify us in affirming Q to be true, unless Q is taken to be the mere contradictory of P, and not a proposition having a positive content of its own incompatible with P. If it is false that a man is just six foot high, it is true that he is not six foot high; but it does not follow that he is only five foot high or over seven foot high.

Coherence, however, involves far more than is included in this statement. It rests also on the principle that the Universe contains no *loose* elements. No partial feature entering into its constitution could be other than what it is without correlated difference in other features, which would again involve correlated differences in yet other features, and so on indefinitely. Thus, if anything in the universe is, had been, will be or could be other than it is, has been, will be, could be or could have been, the difference would penetrate the whole in its systematic Unity. This statement is, of course, to be taken in a purely logical sense. It does not mean, for example, that the future is determined by the present rather than the present by the future. The principle is that there can be "no difference without a difference". A difference in the present would involve a correspondingly different future; but a difference in the future would equally involve a correspondingly different present. In general, if any true proposition were false instead of true, its falsity would involve the falsity of other true propositions; the falsity of these would involve the falsity of yet others; thus, in the end, the supposed falsity of any true proposition would make a pervading difference to the whole system of truth. Similarly, if any false proposition were true, its truth would involve the truth of other false propositions in such a way as to affect the whole system. In the same pervasive way the falsity of a true proposition would involve the truth of other propositions which are false, and the truth of a false proposition would involve the falsity of other propositions which are true.

This being so, when we have to determine whether a certain doubtful proposition is true or false, we may assume

that if we can acquire a knowledge of certain other propositions which are true, our problem will be solved. But the essential presupposition of this procedure is that there must be a way of ascertaining truth otherwise than through mere coherence. In the end, truth cannot be recognised merely through its coherence with other truth. In the absence of immediate cognition, the principle of coherence would be like a lever without a fulcrum.

This is, of course, too obvious to escape the notice of the acute thinkers who find in coherence the sole test of truth. In reply to such objections they urge that the mode in which the principle of coherence works is radically misconceived when we thus divide our beliefs into two groups, one of which derives its whole ultimate support from the other, and does not in turn yield any support to the other. On the contrary, in any coherent system of judgments, in so far as it is coherent, each component item both sustains and is sustained by the others. In so far as the whole system is coherent, it approaches as a whole to truth, and the truth of the whole is a guarantee of the truth of its partial constituents in varying degrees according as these are more or less indispensable to the systematic structure. Some may have a comparatively loose connexion within the general context so that their falsity would make relatively little difference to the whole. Others again may be structural principles which cannot be supposed false without involving the entire logical fabric in ruin. The more loosely connected judgments derive correspondingly less support from the coherence of the whole; those which are more intimately bound up with the system in its unity derive correspondingly more support from it. The ultimate principle is that there is only one perfectly coherent system, the complete truth as it would be known to omniscience, and that the development of human cognition consists in a gradual approach to this system as an ideal never completely attainable by a finite mind. Hence the pursuit of truth is identical with pursuit of coherence, and in proportion as we attain coherence we attain truth. Truth is identical with perfect coherence. But this is not for us. What is possible for us is progressive approximation to truth, and this consists in progressive approximation to coherence.

In criticising this doctrine it is essential to distinguish three propositions which its advocates seem to confuse: (*a*) That the constituents of a coherent system are capable of mutually supporting each other. (*b*) That, in so far as there really is coherence, they always do thus sustain each other.

(*c*) That when they do support each other the explanation of this is to be found merely in their coherence within the system and in no other condition.

As regards (*a*) there can hardly be room for debate. Undoubtedly the coherence of partial cognitions in a systematic whole may, and very commonly does, of itself constitute a ground for regarding each of them as true. The more connected and consistent is the testimony of a witness in a law court, the more likely are his separate statements to be true. The mutual corroboration is still stronger when several independent witnesses concur in affording a coherent view of the facts. The law of gravitation is confirmed by it application to explain the motion of projectiles, the course of the planets, the tides, the common pump, etc.; on the other hand, the fact that these phenomena can thus be connected within a coherent system corroborates our view of each of them severally. Nor is there anything exceptional or mysterious in the conception of mutual support. We cannot make one card stand up on end; but if we take two we may prop them against each other at an angle so that each prevents the other from falling. So in human society a number of individuals may enable each other to live by systematic co-operation.

Let us now examine the second thesis (*b*) that wherever there is systematic coherence, there is *pro tanto* mutual support. Is this so? When the question is once distinctly raised it becomes plain that it must be answered in the negative. A proposition may have its truth guaranteed by its connexion with other propositions within a system and yet it may not in its turn be in any degree a source of support to these other propositions. The existence of a hitherto unknown planet observable at a certain time in a certain position, may be affirmed by the astronomer as required to preserve coherence in the system of his astronomical cognitions. But the judgment that an observer turning his telescope in an appropriate direction at a certain time and place will see a hitherto unobserved star, contributes no support whatever to the other propositions on which it is based. It no more helps to sustain them than the second storey of a house of cards helps to sustain the first. When indeed the observation is actually made and the star actually seen as anticipated, then the fact of its being actually seen does corroborate the general system of astronomical knowledge from which the prediction was derived. But the observer's judgment. "I see a new planet," is not the same as the judgment expressed in the prediction that at a certain time and place a new planet will be observable.

The judgment "I see a new planet" might have been made if there had been no prediction. It might have been made if the observer had turned his telescope towards that quarter of the heavens without any anticipation of seeing anything novel or specially interesting. Indeed, the judgment "I see a new planet" contains as an essential constituent an element which emerges into consciousness independently not only of the prediction and the grounds on which it is based, but of all other cognitions and their systematic nexus. It contains a nucleus of immediacy in the way of sensations actually experienced at the moment by the observer. What is mediate in the judgment is connected with this purely immediate datum as its description and interpretation. The presence of the purely immediate datum gives to the whole judgment a relative independence which enables it to be a source of support to the system of judgments from which the prediction was derived. Its power of confirming these judgments depends on two conditions. (1) The description and interpretation of the datum must coalesce with them in one coherent system. (2) The description and interpretation must not themselves be merely dependent on the judgments which they are to corroborate. The second condition is not fulfilled if the observer's only reason for assuming what he sees to be a new planet is drawn from the prediction that a new planet will be visible. On the other hand it is fulfilled inasmuch as the judgment "this is a new planet" is made independently of the prediction and of the special presuppositions on which the prediction is founded. So far as this is the case the coherence of the datum as described and interpreted with the coherent development of other beliefs verifies these beliefs. And the support is mutual. The observer's judgment that it is a new planet which he sees is confirmed by its coherence with the preformed system of astronomical cognitions. If he does not know of the prediction at the time he makes his observation, he may suspect that he has made some mistake. But when he becomes aware that what he thinks he has observed is just what he ought to have observed in conformity with astronomical theory, his doubt is removed.

The third thesis (*c*) has already been virtually disposed of in dealing with (*b*). The test of the truth of judgments can never be merely their coherence in a system. To say this is like saying that two cards can prop each other up without taking account of the support which each receives from the table on which it is standing. If a system of cognitions has no guarantee but mere internal coherence it is a "castle in the air".

The judgments which are to support each other by their mutual coherence must *pro tanto* have each a relatively independent support of their own. And this support must in the long run be found in some kind of immediacy—either the immediacy of feeling or the immediacy of self-evidence or both. Both kinds of immediacy are throughout essential to the development of knowledge. At present it is enough to point out that the development of our knowledge concerning actual existence as distinct from the mere logical possibilities with which mathematics is by some supposed to deal, is only made possible by a perpetual influx of fresh material in the way of sensations and feelings. These data demand incorporation in the same system with other cognitions, but they are not derived from other cognitions. They emerge in consciousness immediately. The test of truth is not mere coherence but coherence capable of including within its systematic unity all relevant data with the specific interpretation appropriate to the specific nature of each of them. It is not mere coherence but coherence together with comprehensiveness. Its value depends on the range and diversity of the relatively independent items which are brought within the coherent whole and not merely on the degree of their coherence. The coherence which is purchased by ignoring relevant facts is that which characterises the views of a madman possessed by a fixed idea, or of the ingenious liar who supplements lie by lie so as to maintain consistency.

## Objections and Alternative Views.

Why, it may be asked, have I taken so much trouble to expound a view which no one is likely to deny. Those who say that coherence is the ultimate test of truth cannot really mean that knowledge grows through a purely internal development in which relatively new cognitions are obtained merely by a logical manipulation of preformed cognitions independently of incoming data. Every one knows that theories are tested by their power to explain facts. If the advocates of the coherence-test do not emphasise this point, it must be because they regard it as too obvious to need extended treatment. On the other hand if they really do intend to ignore or deny the part played by immediacy and the relative independence of facts apprehended by observation and experiment, it scarcely seems worth while to argue with them.

Neither of these alternatives can be accepted. The difference between the view I have put forward and that main-

tained by the thorough-going advocates of coherence as the ultimate test of truth is not merely a difference of emphasis. They do mean to deny that factual immediacy fulfils the function which I assign to it. The denial of this belongs to the essence of their contention. On the other hand, their position cannot be ignored as undeserving of notice. There is method in their madness, if madness it be. They adduce arguments for what they say which deserve most careful examination.

In the first place it is urged that the immediate ceases to be immediate in becoming mediated. The gradual attainment of truth is also the gradual dissolution of the relative independence and immediacy of what we call *data*. There would be no *data* for an omniscient mind. For an omniscient mind, each distinguishable feature or aspect of the universe would appear as having its being wholly constituted by its connexion within the indivisible unity of the whole. Indeed the apprehension of the part would be absolutely coincident with the apprehension of the whole. To quote Mr. Joachim, "An 'immediate apprehension' is one, the grounds of which are not stated. . . . An 'immediate intuition,' in short, is a belief which the believer cannot justify, or at any rate has not yet justified, by rational grounds. . . . The difference, *e.g.*, between blue and red is for us at first *just* a difference. We feel it, experience it immediately, and there seems no more to be said. But as knowledge grows we can and do mediate it. A *partial* mediation in the case just quoted is achieved when we express the physical conditions of blue and red in terms of precise quantitative distinctions within the identity 'wave lengths of ether'. Undoubtedly there remains in such cases, and perhaps in all cases, a residuum opaque to mediating thought. The universe is one; but its unity is expressed and revealed in an infinity of individual differences which retain for the finite mind their 'irrational flavour,' their 'immediacy,' however far the work of rational mediation has progressed. But the immediate apprehension of these individual differences sets its problems to thought, and is not their solution. And though thought cannot by its mediation exhaust the *data*—though finite intelligence cannot entirely overcome the opacity of its material—it attains to truth only in so far as its mediation progresses, and not in so far as its progress is barred."

According to this theory, the relative independence of what we call data and the immediacy in which that relative independence has its roots are merely imperfections incidental to the cognitive processes of finite beings which dis-

appear as knowledge develops. Now, if it be once admitted that mediacy and immediacy are mutually exclusive opposites, nothing can be said against this. For it is undeniable that the advance of knowledge essentially involves the mediation of previously unmediated data. Hence, if immediate cognition ceases to be immediate in becoming mediated, the attainment of truth must mean the abolition of immediacy; immediacy, therefore, cannot be any part of the test of truth. It merely expresses ignorance or even error. The argument seems irresistible if its presupposition is granted, the presupposition that the immediate ceases to be immediate in becoming mediated. But how can this presupposition be questioned? Is it not self-contradictory to say that mediation and the absence of mediation are mutually compatible? This is indeed a contradiction. But the real question is whether immediacy consists in the absence of mediation. So soon as this question is definitely raised it becomes plain that immediate cognition must have a positive character of its own, and cannot be merely the negation of mediate cognition. Otherwise there would be no cognition except mediate cognition, and immediate cognition would be simply synonymous with blank ignorance. How, then, could it, to use Mr. Joachim's language, "set problems for thought"? or supply "material" to finite intelligence? A datum is something to be interpreted or "mediated by thought". It cannot therefore consist in a mere absence of cognition—in blank ignorance. If it is replied that what we ordinarily call "data" are not purely immediate but contain a large element of mediacy, I answer that this only pushes the question farther back. The cognition is called a datum because what is mediate in it consists in the description and interpretation of an element which is immediately presented—which is not merely known as required to interpret something else, but as something to be interpreted. When I look on the table before me and see what I take to be a match-box, the judgment "this is a match-box" which expresses my present perception undoubtedly contains much unconscious inference. But this mediate element is, so to speak, radiated from a central nucleus of immediacy in the visual and other sensations actually experienced at the moment. This nucleus of immediacy constitutes an original point of departure in the development of knowledge, and it communicates to the rest of the perceptual judgment its own originality so as to constitute it a relatively independent datum.

Now the question at issue is whether immediacy taken in this positive sense can survive even when the relatively im-

mediate judgment becomes mediated by "rational thought". We may show that it can and must so survive, (1) by a direct analysis of the facts, and (2) by consideration of the abstract necessities of the case. (1) When I see the match-box on the table, I may have present to my mind reasons which account for its being there and which would make me expect to see it there. On the other hand I may have no such reasons; the sight of the match-box may even occasion a shock of surprise and leave me puzzled to account for its presence. But whether I have or have not reasons for expecting to see the match-box, in both cases equally I do see it. In both cases there are immediate presented sensations demanding a certain interpretation. The relatively immediate judgment remains relatively immediate whether or not it is mediated in the way described. This is most instructively illustrated when we start with relatively mediate and pass to relatively immediate cognition. I anticipate, for instance, that when I look in a certain direction, I shall see a match-box. As compared with the actual seeing of the match-box this is a relatively mediate cognition. For the sensations which in actual seeing would be directly sensed, are here merely expected on the ground of preacquired knowledge and belief. Their occurrence under the assigned condition is cognised merely as something required to make the preacquired system of knowledge and belief internally coherent. When from this mediate cognition we pass to the actual sensations themselves, what ought to take place? According to the theory immediate cognition is merely defect or imperfection —is merely the absence of mediation. Plainly the transition to immediacy ought to involve no advance, no further step in the development of knowledge. Inasmuch as the actual sense experience has been anticipated in mediate cognition the following immediate cognition has already been included and, so to speak, superseded in advance. But, in fact, the actual seeing does constitute a fresh step. It emerges as a relatively independent and original cognition which *confirms* or *verifies* the anticipation. This is still more obvious if, as may happen, we fail to have the anticipated sensations when we fulfil the required condition. For, in this case, the immediate cognition asserts its own distinct originality by positive antagonism to the mediate cognition. The mediate cognition requires the occurrence of certain sensations under the assigned conditions. It thus, by its own nature, appeals to a certain relevant immediacy as a test of its own truth. If, under the assigned conditions the appropriate sensations are not sensed, it is falsified. From one point of view, indeed,

it may be said to be self-condemned. But this is only because by its very nature it refers beyond itself to an immediate cognition which as such is relatively original and independent of it.

This passage from mediacy to immediacy, which we call verification or appeal to matter of fact, is just as essential in the development of knowledge as the passage from immediacy to mediacy which we call interpretation or explanation. The immediation of the mediate is just as indispensable as the mediation of the immediate. The two processes necessarily interpenetrate each other in essential correlation. The interpretation of given data has constantly to be verified by appeal to relevant elements of immediacy contained in new data. On the other hand, hypotheses are verified only in so far as they explain or enable us to anticipate the facts which verify them. But if the immediation of the mediate is thus co-essential in the development of knowledge with the mediation of the immediate, it must follow that ideally perfect knowledge must be regarded as the limit of progress in both directions. It must be conceived not only as completely mediated but also as completely immediate.

What this means will be best seen when we approach our problem from a more abstract point of view. Our position is that immediate knowledge does not become less immediate by being mediated. Does not this view, it may be asked, involve a contradiction? Immediate cognitions in so far as they are immediate are relatively independent; in so far as they are mediated they are mutually dependent. How can we avoid admitting that interdependence so far as it extends excludes relative independence, so that where the interdependence is complete relative independence must be entirely abolished? I reply, in the first place, that if this were really so, complete interdependence would itself involve a hopeless contradiction. For interdependence presupposes relative independence. Inasmuch as *b* depends on *a*, *a* must be relatively independent of *b*, and inversely; if, therefore, *a* and *b* are to depend on each other, they must be relatively independent of each other. If the being of *a* is wholly derivative from that of *b* and the being of *b* is wholly derivative from that of *a*, we are confronted with the marvellous performance of the Kilkenny cats, so to speak, inverted. Mutual creation is as absurd as mutual annihilation. It may be said that the parts finally depend on the whole to which they belong and not on each other. The obvious answer is that the whole must be inclusive of all its parts;

hence in affirming that any one part is dependent on the whole we affirm that it is dependent not only on the other parts but on itself; in other words, we affirm that it is relatively independent.

There is yet a second and a more subtle criticism to be met before we can regard our position as secure. The principle on which this criticism is founded is that nothing can enter into new relations without undergoing more or less modification. Nothing can have just the same character as part of a systematic whole which it has in separation from that whole. A patch of colour, for example, is something very different when it appears on an otherwise blank sheet of paper and when it appears as an integral part of a picture. The application to the present question is as follows. It may be admitted that in a sense a relatively immediate cognition is immediate both before and after it is mediated. But this, it is urged, does not touch the really important issue. The vital question is whether we are justified in regarding what is cognised before mediation as simply identical with what is cognised after mediation. Can what is apprehended in detachment from a systematic context of presuppositions and implication survive unaltered as the content of a cognition in which it appears as an element within this systematic context? This, it is maintained, is impossible. But the mediate cognition is admittedly a higher stage in the development of knowledge than the unmediated. Hence, so far as they differ, truth is found in mediation and not in "*isolated*" immediacy. The inevitable corollary of this doctrine is that all judgments in so far as they are unmediated must be false. And since no judgment of a finite mind can be completely mediated, it follows that every human judgment must be more or less erroneous. The savage judges that flint when struck emits sparks. But in so judging, he is unaware of the vastly complex system of conditions on which this phenomenon has been found to depend by modern science. It is therefore assumed that he cognises it as existing in isolated independence dissevered from what is in reality its inseparable context. So far as this is the case, his view is erroneous. Inasmuch as cognition is immediate, it is not only immediate but isolated, and isolated immediacy essentially involves falsity. Falsity is displaced by truth only as mediating thought advances; hence the test of truth is ultimately coherence alone, and not immediacy at all. "Every truth," says Bradley, "because incomplete, is more or less erroneous. And because the amount of incompleteness remains unknown, it may

conceivably go so far as to destroy the judgment."[1] "In the end, no possible truth is quite true. It is a partial and inadequate translation of that which it professes to give bodily."[2] The argument is that every human judgment asserts in detachment from its presuppositions and implications something which has no being in such isolation. It is thus "a partial and inadequate translation of what it professes to give bodily". In other words, it is false.

This reasoning involves two steps which must be clearly distinguished. The first is expressed in the general principle that a judgment in becoming incorporated in a new context of judgments must itself undergo some kind of modification. The second is contained in the assumption that the modification must be such as to make the prior unmediated judgment incompatible with the subsequent mediated judgment, so that, inasmuch as they differ, one of them must be false. This second assumption seems to me erroneous. Before proceeding to examine it, it will be well to define clearly the exact nature of the question at issue. The thesis with which we have to deal is that a relatively unmediated judgment is as such necessarily incompatible with the same judgment as mediated. We are only concerned with cases of successful mediation. We have nothing to do with instances in which a judgment has to be expressly rejected or reconstructed because it will not fit into the growing system of knowledge and belief. We may take by way of illustration the following two judgments: (1) It is possible to produce sparks by striking flint; (2) the sparks thus produced are fire which is already contained in the flint before it is struck. The first proposition is common to the primitive savage and to modern science. Modern science has done much towards explaining it, but has found no ground for denying it. If, therefore, it has been falsified through the advance of knowledge, it has been falsified merely by being successfully mediated—merely through a discovery of its presuppositions and implications. It is otherwise with the second proposition. This has been falsified in a fundamentally different way. It is condemned as false because it cannot be mediated, because it refuses to take its place in the system of judgments which constitutes modern science.

The view that a judgment is falsified merely by being

[1] *Appearance and Reality*, p. 536.

[2] *Ibid.*, p. 544. Bradley makes a reservation in the case of certain propositions expressing the general nature of reality, but this reservation makes no essential difference to the question at issue.

mediated certainly wears the appearance of a paradox. Apart from logical or metaphysical theories, we should all naturally say that the savage's assertion that "sparks may be produced by striking flint" is none the less true because he does not know how and why this is so. Explanation will only serve to confirm its truth; the way to show its falsity is to show that it cannot be explained. In entering into a new context of judgments it does indeed undergo modification, but the modification is not of a kind which involves its previous falsity. It is what we describe as the acquirement of new significance, importance or interest. But significance, importance or interest cannot, in any relevant sense, be ascribed to false propositions. When we speak of the importance of a false proposition we mean the importance which it would possess if it were true, and which may be wrongly attributed to it by those who believe it. Thus judgments can acquire fresh significance only if they are true. Hence the acquirement of fresh significance cannot imply that they are initially false.

How, then, is it possible for such writers as Bradley to maintain the opposite view? Why do they hold that a relatively unmediated judgment is, as such, false? Their fallacy seems ultimately to lie in a confusion between unmediated judgment and what they call *isolated* judgment. In an unmediated judgment, so far as it is unmediated, we affirm something without knowing what its conditions are. Hence it is inferred that we affirm it without affirming its conditions and this means that we affirm it as unconditioned: a partial feature of the universe is apprehended in isolation from the whole to which it belongs and therefore not as being a part but as a self-contained unity detached from its connexions. It is as if the individual knower in virtue of his finite nature had the miraculous power of carving out for himself separate portions from the perfect unity of the universe and presenting them to himself as thus dissevered from the whole. This power of "mutilating" reality as Mr. Bradley calls it is what fills so important a part in Spinoza's system under the title of "Imagination".

The vital question is whether affirming something, without knowing what its conditions are, necessarily implies a failure to affirm the unknown conditions. At the first blast it may seem that this must be so; for how can we affirm what we are ignorant of. But a closer scrutiny of the nature of knowledge reveals a way of escape from this difficulty. The difficulty arises from a failure to take account of the distinction between implicit and explicit cognition. The meaning of

this distinction will be best brought out by an example. A says to B: "I give you whatever money is contained in this box, provided that it does not amount to more than five pounds". A is ignorant what money is in the box. There may, so far as he knows, be no money in it, or there may be sixpence in coppers, or two sovereigns. B now opens the box and finds eight sixpences, a half-crown piece, and a sovereign. Both A and B then rightly recognise that it was precisely this sum in this form which A promised to give B, although when he made the promise he did not know what it was. In promising to give B whatever money was contained in the box he promised implicitly to give him eight sixpences, a half-crown piece, and a sovereign. Initially he thought of the money only as determined by its being in a certain relation to something else,—by its being contained in the box. But this determination leaves open a wide range of alternative possibilities—a wide range of alternative answers to the question,—What money? and how much? None the less the maker of the promise has committed himself in advance to accept whichever alternative is actual. When therefore the box is opened and a certain possibility is found to be actualised, his original statement is indeed further defined and so acquires a new significance; but it is not in any degree falsified. If he really meant what he said before the box was opened, he means it still, and not anything incompatible with it, after the box is opened.

This holds for all judgments. Whoever affirms anything, thereby affirms all its conditions; in so far as he knows them and has them present to his mind at the moment, he affirms them explicitly. In so far as he does not know or is at the moment oblivious of them, he affirms them implicitly. This is clearest where the mental attitude is distinctly interrogative. For, in this case, there is an attempt to find out what the unknown conditions are, and this very attempt presupposes that they are implicitly though not explicitly cognised. They are cognised as being the presuppositions and consequences of what is relatively a datum. As presuppositions and consequence of the datum, they are taken to be continuous with it; they are therefore taken to have a being as determinate as it has. But what their precise nature is remains as yet more or less completely undetermined for the inquiring mind. Inasmuch as this is so, they are asserted not explicitly but implicitly. The questioning attitude is constituted by interest in making explicit what is thus implicit. As Plato long ago pointed out, we cannot seek to know anything unless, in a sense, we already know what it is that we seek to know.

We cannot stop short at this point. It is not only in actual questioning that the implicit assertion of conditions is presupposed. It is also presupposed in the mere possibility of a question being raised. It is presupposed in the possibility of mediating the relatively unmediated. If anything were really apprehended in isolation, it would neither require nor admit of explanation or interpretation, or even description. It would be cognised as something self-existent and self-contained. In other words, it would be cognised not as part of the universe but as being itself a universe. The thought of assigning its conditions could never arise because it would be apprehended as unconditioned. It would be cut loose from all communion with whatever is other than itself, and this means that mediating thought could not in its case ever get a beginning. No questions could ever be answered concerning it, because none could ever be asked. What has once been presented in *isolated* immediacy must remain for ever in its "sacred aloofness". The systematic development of knowledge is possible only because cognition of a part of the Universe is not merely cognition of part but cognition of a part *as such*, and therefore partial cognition of the whole from the point of view of the part. It is cognition of the whole as implied in the recognised incompleteness of the part.

We must, therefore, agree with Mr. Joachim that "incomplete or fragmentary thinking is not *as such* false; nor is the mind, through which the complete truth obtains partial expression, thereby in error".[1] But it is strange that he fails to recognise how irreconcilable is this position with the view on which he insists throughout the greater part of his book. For instance, he occupies much space[2] in arguing that no human judgment can be quite true, and the only reason which he adduces is that in no human judgments are presuppositions and consequences completely apprehended in articulate detail. Take, for example, the perceptual judgment, "This tree is green". "What it affirms," says Joachim, "is subject to a complex mass of conditions unexpressed and yet implied. It draws its meaning and its truth from an inarticulate background of this kind. The judgment of fact . . . demands the articulate expression of this background in the form of an explicit system of judgments. And yet in that system the original judgment, as formulated in isolation, and as the mere statement of fact, would no longer persist."[3] Now of course we

[1] *The Nature of Truth*, p. 160. [2] *Ibid.*, p. 85. [3] *Ibid.*, p. 107.

agree that the judgment does not persist "as formulated in isolation and as the mere statement of fact".[1] What we assert and what Mr. Joachim himself asserts in other passages is that the judgment never is formulated in isolation, never is, in the required sense, a mere statement of fact. In affirming the fact we affirm all its presuppositions and consequences whatever these may be. The articulate definition of these presuppositions and consequences cannot falsify the original judgment. For it only makes explicit what the original judgment asserts implicitly. And Joachim's elaborate discussion only serves to make this plainer. "The brute fact that Cæsar crossed the Rubicon in 49 B.C. is pregnant with significance, owing to the concrete political situation within which it took place. But the actual event was not a nucleus of 'brute fact' encased, solid and distinct, within a surrounding complex of conditions. It was Cæsar, at the head of his army and animated by conflicting motives of patriotism and ambition, who crossed. . . . This—and more—is the meaning of the historical judgment in its proper content, its *definite* meaning. . . . We can be sure, at any rate, that the actual happening contains no *bare crossing of a stream by a man* in the abstract as a solid grain of fact, separable from a complicated setting which particularises it." It is indeed true the actual happening can contain no such solid and separate "grain of fact". But then it is equally evident that no one ever did or could assert fact as isolated in this way. No one ever did or could affirm the "bare crossing of a stream by a man in the abstract". No one could affirm that a stream flowing in no determinate place at no determinate rate and without any determinate width was crossed by a man living at no determinate time, neither definitely bald nor having any determinate number of hairs, neither five foot nor six foot high nor of any other definite stature. In saying "a man crossed a stream" we may be ignorant where the stream was situated or how tall the man was, and so on with other specific determinations. But our ignorance is not denial. On the contrary we implicitly affirm what we cannot explicitly define.

If this be so, it would seem that the judgments of finite minds are not necessarily false merely because they have an "inarticulate background," or because they would be transformed for perfect knowledge. The transformation for perfect knowledge may consist only in a complete insight into

[1] *The Nature of Truth*, p. 107.

their presuppositions and implications. But such a transformation does not involve the falsity of finite judgments. On the contrary it is possible only in so far as they are true. Hence, apart from more special reasons to the contrary, it may be that for perfect knowledge sparrows fall to the ground and the hairs of our heads are all numbered.

# III.—PLATO'S PSYCHOLOGY IN ITS BEARING ON THE DEVELOPMENT OF WILL (I.).

By Mary Hay Wood.

## INTRODUCTION.

It may well appear at first sight an unwarrantable assumption that the notion of Will is in any sense an element in the Platonic psychology. Yet it can hardly be supposed that the phenomena which have attracted so large a share of attention among modern philosophers should have been overlooked by a mind of such extraordinary scope as Plato's —the philosopher who of all others might be said to have attained (in his own famous phrase) *θεωρία παντὸς μὲν χρόνου, πάσης δὲ οὐσίας*. It is true that he has formulated no doctrine, has left us no definition—no single term even—that can be appropriated by the modern notion of Will; had he done so there would be no place for such an essay as this. Yet the very process of abstraction and classification by which philosophy or science makes headway brings with it its own dangers, and the mere fact of giving a name is apt to involve the fallacy of hypostatisation. The name, given at first to what is merely one aspect of the whole, imports a false appearance of individuality, as though what is named were a part, separable from the totality; so Will has come to be regarded as a faculty of mind, almost, if one may use the metaphor, as a piece of the mind's furniture.

Now if it can be shown that Plato's account of mind as a whole does inevitably imply some such aspect of it as that now known as Will, his psychology is then the less misleading in that it has avoided the pitfall of hypostatisation. That fallacy is seen perhaps at its worst in the phrase with which the notion under discussion seems now so inextricably entangled, *viz.* "Free Will," yet the notions of freedom and slavery as applied to conduct are familiar enough in Plato, and let but this modern idea of Will once shake off the fatal influence of the name and it will appear as merely

one aspect of mental life—that aspect in which consciousness is regarded as an activity self-directed.

Now it was surely Plato himself who first made explicit the true nature of this activity of thought or consciousness, since it was he who first distinguished clearly the immaterial from the material.[1] Thenceforward there could be no more fusing of the two, the soul could no longer be conceived—even as Plato himself in his Heraclitean days must have conceived it—as a fiery substance. Parmenides' world of Pure Being had become after all attainable, though in a fashion he perhaps never dreamed of.

But there were ideas other than metaphysical that helped to form the Platonic psychology. Socrates discerned in the problems of right conduct the whole meaning of human life.[2] The essence of conduct was that it should be directed, not by mere chance, but by knowledge. Every form of human activity he found to be good only in so far as it kept its end in view—was aware of itself and what it was doing.[3] This, then, was the first requirement—to know oneself.[4] Knowledge of oneself would be knowledge of the end, of what one was "good for," *ἑαυτὸν ἐπισκεψάμενος, ὁποῖός ἐστι πρὸς τὴν ἀνθρωπίνην χρείαν* (*Mem.*, iv., 2, 25). But for right conduct one must have also knowledge of the means,[5] for knowledge alone secures variety of choice,[6] and such knowledge must not be of mere words or opinions, but of realities, *τί ἕκαστόν ἐστι*.[7] So it came about that the right direction of self—in Kantian phrase, the Good Will—was identified by Socrates with Wisdom.[8] Only such self-direction and such wisdom or knowledge ensured true freedom—freedom of choice and freedom of action,[9] freedom in fact to choose the best.[10] But how is the best to be determined, how is Wisdom to be attained?

Through education, says Socrates, for the very best natures are those that need the most training, *i.e.*, this native goodness seems, for him, to consist in a surpassing strength of activity, the more disastrous therefore if wrongly directed.[11] Yet after all this only carries us round in a circle; where, we may ask, does the educator himself get his notion of the Best? It was Plato's task to find a solution of this problem. Here again he gains an advantage from the greater fluidity and elasticity of a language not yet moulded and stamped by

[1] *Cf.*, *e.g.*, *Rep.*, 611 C-E, 612 A. [2] Xen., *Mem.*, iii., 9, 14.
[3] *Mem.*, iii., 9, 10, and iv., 6, 11. [4] *Ibid.*, iv., 2, 25.
[5] *Ibid.*, iii., 9, 4. [6] *Ibid.*, iv., 2, 29. [7] *Ibid.*, iv., 6, 1.
[8] *Ibid.*, iii., 9, 4, 5. [9] *Ibid.*, iv., 5, 11. [10] *Ibid.*, iv., 5, 3.
[11] *Ibid.*, iv., 1, 4.

philosophy or metaphysics. The Greek usage of the very words καλός and ἀγαθός in constant association typifies the interchangeableness of the ethical and the æsthetic view of life; and Plato (whose very manner of speech betrays him in spite of his frequent railings against art)[1] looks out on life with an artist's eye.[2] He notes that in all skilled workmanship success depends on the presence of a certain law or principle[3] that guides the activity; the worker looks forward,[4] as it were, to this ideal, the perfect form of that which he is making.[5] It is thus homogeneity, harmony, order that characterises the best kind of activity.[6] Where then does this order and harmony, this ideal element, come from? It seems to be, he says, in some fashion akin to man's nature,[7] οἰκεῖον, since he welcomes it with pleasure,[8] τὸ δὲ ἡδὺ κοινὸν πάσαις ταῖς Μούσαις (*Laws*, 802 C). Ὀρθότης, "rightness," the mean between extremes, the "neither too much nor too little" of art,[9] suggests also the straight growth of the healthy plant, developing harmoniously, neither one-sided nor twisted, but fulfilling the law of its being.[10] So man too has a nature, φύσις, which, if given right nourishment, will in process of time manifest its own perfection.

It is to be noted that the practice of the arts is sometimes, with Plato, more than a mere analogy of right conduct, it is even a heaven-sent means towards it.[11] So—often by way of jest, as when man is described as the plaything of the gods,[12] or by myths—Plato makes clear that for man as for the universe there is a perfect form, a pattern laid up in heaven as it were, and yet latent within him and directing his growth; rhythm and order, harmony and balance, simplicity and law, these are all aspects of the same growth or development, or in Platonic language of φύσις. It remains to examine more in detail the various stages of such development in the human soul.

The essential character of soul, of life, is movement.[13] Yet movement must be conceived as directed; ψυχή as itself the

[1] *E.g.*, *Rep.*, 392 A. *Cf. Rep.*, 595 B, 599 A, etc.
[2] *Ibid.*, 377 E, 361 D, 540 C; *Laws*, ii., 658-670, and vii., 817 B.
[3] *Gorgias*, 503 E.
[4] This is characteristic of all that corresponds to true art. *Cf. Gorgias*, 501 B, and *Rep.*, 596 B.
[5] *Rep.*, 596 B. [6] *Laws*, 746 D. *Cf. Protagoras*, 326 B.
[7] *Laws*, 733 A. [8] *Lysis.*, 221 E-222 A.
[9] *Politicus*, 284 A. *Cf.* also *Symposium*, 210 B, and *Phædrus*, 250, where the same power is ascribed to the love of beauty.
[10] *Cf. Laws*, 765 E.
[11] *Politicus*, 274 C; *Timæus*, 47 C, E; *Laws*, ii., 672 E, and vii., 803 E.
[12] *Laws*, 644 D. [13] *Ibid.*, x., 895 C.

source of movement is therefore *self*-direction.[1] Every living organism, *σῶμα ἔμψυχον*, possesses in a sense this character, this is the principle of growth (*φύσις*).[2] But nature thus comes to have at once the dual aspect so constantly the problem of philosophy:[3] motion is directed to an end, it answers to change, to a process of *becoming*[4] whose end would be a state of *being*, implying rest and permanence.[5] Movement may be conceived as from point to point, the Many thus growing into a Unity, Parts into a Whole.[6]

Again the twofold notion, of movement, and of that which moves as at once the origin and result of the motion, corresponds to the dualism of Form and Matter.[7] Regarded as growth this becomes assimilation,[8] involving an inward and an outward,[9] a subject and an object,[9] self and other[10]—the two sides always complementary, interdependent. From within *ψυχῆς φύσις* is a latent possibility of development,[11] an inherent power of self-direction (*ὁρμή*), yet from without comes the sustenance,[12] the means appropriate to sustain each form of motion,[13] giving the impulse, and in so far supplying its direction. As a stream,[14] though keeping its original direction, will alter its character, *i.e.*, take this or that shape or direction[15] according to the nature of the country which feeds it, or as a plant will assimilate itself to the soil or climate and yet assimilate their nourishment to itself,[16] so with the growth and development of the soul. Psychology would seem to be concerned with the inward aspect of the process, yet on examination this is seen to be inextricably involved in the other—the inward presupposes the outward, the outward the inward. So intimate is the relation between self and others, the individual and the community, that like the sphere or the circle there is neither beginning nor end but the whole is self-contained.[17] Yet after all the whole itself thus conceived seems to be only relatively permanent (for it admits of growth (*αὐξανομένη*) and decay), and so seems to demand some further explanation, some ultimate origin for the changing in the changeless.[18] All that partakes of soul, says Plato, is changing.[19] Yet through

[1] *Laws*, x., 896 A. [2] *Phædrus*, 245 E.
[3] *Phil.*, 15 E. *Cf. Philebus*, 14 C, D; *Timæus*, 57 E.
[4] *Laws*, x., 896 A. [5] *Cf. Soph.*, 256 E.
[6] *Ibid.*, 249 D. *Cf.* also *Laws*, x., 896 D. [7] *Cf. Laws*, x., 897 A.
[8] So in *Rep.*, x., 611 C. *Cf.* also *Tim.*, 90 C.
[9] *Laws*, x., 897 A. [10] *Tim.*, 37 B. [11] *Rep.*, x., 611 C.
[12] *Ibid.*, x., 611 C. [13] *Tim.*, 90 C. [14] *Cf. Cratylus*, 415 D.
[15] *Cf.* also *ibid.*, 419, 420; *Rep.*, 485 D.
[16] *Laws*, vi., 765 E; *Rep.*, vi., 491 D. [17] *Rep.*, 424 A (bk. iv.).
[18] *Cf. ibid.*, ix., 592 B. [19] *Laws*, x., 904 C.

such change the changeless is revealed, for "in changing they move according to law and the order of destiny".[1] The origin of the whole lies beyond the power of human thought, the self-moved is a divine creation, its impulse (*ὁρμή*) is of the eternal.[2] Only in this way can a meaning be found for the phrase in *Republic*, 424 A, *ἐάνπερ ἅπαξ ὁρμήσῃ εὖ*; that is to say we must ascribe to God the arrangement of the universe whereby good shall ultimately predominate over evil[3]—he implants the principle of growth (*φύσις*), his purpose is the nature of the whole, *ὁ τοῦ παντὸς ἐπιμελούμενος* (*Laws*, 903 B). Yet this nature is a principle of self-movement, self-development, in the individual soul[4] (*ἐν ἑαυτοῖς κεκτημένα τῆς μεταβολῆς αἰτίαν*), which is left to retrace for itself the order of the universe, to find the direction in which it is in fact started, to assimilate its will to the divine.[5] So, repeatedly in the form of myths, Plato describes the beginnings of psychic movement. After this fashion in the *Politicus* a new meaning is given to the old fable of the 'earth-born men'. These are described as being under the immediate government of God;[6] there was no such thing as a community;[7] of mental development under such conditions we can say nothing (*ἀφῶμεν ταῦτα*).[8] Then the change came, and the pilot let go the helm and retired[9]—the age of innocence was succeeded by an age of tradition.[10] This, through the disorder of the world's inherent nature, threatens to plunge it in chaos,[11] the pilot again intervenes and takes the helm[12] and there succeeds the age we know, in which mankind, no longer the child of earth, but self-born, self-nourished and self-taught, as the universe itself is self-governed,[13] is made like it—the part to the whole. In other words men are dependent no longer each on God, but each on the other. Yet so helpless are they that even now the gods must intervene with gifts and instruction before the arts can be developed.[14] It is out of these that mankind builds up a common life (*πάνθ' ὁπόσα τὸν ἀνθρώπινον βίον συγκατεσκεύακεν ἐκ τούτων γέγονεν*), and works out a method of self-government (*τὴν διαγωγὴν καὶ τὴν ἐπιμέλειαν αὐτοὺς αὑτῶν ἔχειν*), since only so can men follow and imitate the order of the universe, their proper means of life and growth.[15]

Thus in a figure Plato describes the origin and growth of

[1] *Laws*, x., 904 C. [2] *Cf. Rep.*, 611 E. [3] *Laws*, x., 904 B.
[4] *Ibid.*, 904 C. [5] *Cf. Tim.*, 29 E, also 90 C.
[6] *Politicus*, 271 E. [7] *Ibid.*, 271 E. [8] *Ibid.*, 272 D.
[9] *Ibid.*, 272 E. [10] *Ibid.*, 273 B. [11] *Ibid.*, 273 C.
[12] *Ibid.*, 273 D. [13] *Ibid.*, 274 A. [14] *Ibid.*, 274 C.
[15] *Ibid.*, 274 D.

society and, by consequence, of mind. For the history of the individual "written in larger letters"[1] is the history of society—the individual mind too in its first helpless stage[2] must, if it is to become self-ruling[3] and to find its place in the order of the whole, have some impulse, some training and instruction[4] such as that first given by the gods to men. So, leaving for the time the outside aspect, we may go on to observe from within the stages of growth and assimilation that mark the development of mental activity in the individual.

## Mental Activity—Whole and Part.

Plato has often been accused of a defective psychology[5] in that he divides the mind into 'faculties'. This will be seen to be an accusation ill-founded. (This question has been so thoroughly and satisfactorily discussed by Mr. Archer-Hind in the Introduction to his edition of the *Phædo* that it would be only presumptuous to do more than add, as here, one or two passages that have seemed to me to bear on it.) For (*a*), in the first place, Plato constantly insists on the activity of soul as a whole,[6] and (*b*), secondly, in applying one and the same term to each of the so-called 'faculties' he clearly indicates that they are merely aspects of one and the same activity:—

(*a*) In the *Timæus* mental development is presented as the gradual emergence of order out of a chaos of random movements:[7] "the revolutions calming down go their own way and become settled as time passes on"—the different capacities are conceived as different directions or forms of the same psychic activity. Again in book x. of the *Laws*, under the one head of "movements of the soul" are enumerated the various phenomena of mental life[8]—"will, consideration, attention, deliberation, opinion, joy and sorrow, confidence, fear, hatred, love and *other primary motions* akin to these". In the light of these passages it seems clear that the three divisions of soul in the *Republic*[9] are to be under-

[1] *Cf. Rep.*, 368 D, 369 A.
[2] *Laws*, ii., 672 C. *Cf. Laws*, vi., 765 E; *Rep.*, 369 B.
[3] So in *Rep*, viii., 554 D, *ἀστασίαστος ἐν ἑαυτῷ*.
[4] *Ibid.*, 554 B, *οὐ γάρ, οἶμαι, παιδεία ὁ τοιοῦτος προσέσχηκεν.* *Cf. Laws*, 656 E.
[5] *Cf.*, *e.g.*, Aristotle, *Περὶ Ψυχῆς*, i., 5, 411b, 5, and Wallace's Introduction, pp. xxxvii.-lii. (Aristotle's *Psychology*).
[6] *Cf. Phædo*, 94 C; *Rep.*, v., 462 C, D; *Theæt.*, 185 E.
[7] *Tim.*, 43 A. 44 A, B; see Archer Hind's translation.
[8] *Laws*, x., 897 A (the translation is Jowett's).
[9] *Cf. Rep.*, iv., 439.

stood merely as kinds or forms of activity. "Form," *εἶδος* (*ἰδέα*),[1] is the very word used, *e.g.*, in book ix., 572 A, where the rousing of activity in one form would seem to imply its inhibition in others—*ἡσυχάσας μὲν τὼ δύο εἴδη, τὸ τρίτον δὲ κινήσας*. It is perhaps hardly justifiable to dogmatise at all from the use of this word. But at least it is noteworthy that in the *Republic* Plato seems even to avoid as far as possible the use of a noun, to prefer to indicate the, so-called, 'parts' of the soul merely by the neuter of the adjective: so in *Republic*, iv., 440-441, *τό θυμοειδές, τὸ ἐπιθυμητικόν, τὸ λογιστικόν*,[2] and again in book ix., 589 E, 590 A, B, *τὸ θειότατον . . . τὸ λεοντῶδές τε καὶ ὀφεῶδες*: and again the nouns he does use, *εἶδος* (*Rep.*, 439 E-440 A, 590 C, *Phædrus*, 253), *γένος* (*Tim.*, 69 D), *φύσις* (*Rep.*, 441 A, 589 B), are such as to imply rather process than state, rather varying aspects than any fixed and permanent distinction (*Cf. πάθη τε καὶ εἴδη*, *Rep.*, 612 A). There are indeed two places[3] in the *Republic* where the word *μέρος* is used, but one of these occurs in a description of the disorganisation and disintegration of the soul that is implied in *ἀδικία*, and it would seem therefore as though Plato were here emphasising the fact that the true nature of soul is *undivided* (*Rep.*, 444 B). These different manifestations then represent also stages of growth,[4] requiring each its appropriate nourishment,[5] and only thereby developing[6] so as finally to present a harmonious whole—a whole in which the elements are not lost but blended and interfused so as to realise[7] at last their true character in the complete activity.

(*b*) The general term that seems to be applicable to all the manifestations or forms of movement is *ἐπιθυμία*.[8] In the *Timæus* the bodily and mental aspects of activity are described as *ἐπιθυμίαι*;[9] in the myth of the *Politicus* it is *ἐπιθυμία* "fated and innate" that directs the universe left to its own guidance;[10] and in the *Laws* *ἐπιθυμία* is the self-directing principle in man.[11] Here, too, as has been seen, it is "fated and innate";[12] that is to say it has a certain bias, is selective, choosing this direction and not that. This innate sense of what belongs to it, the sense of direction, of motion helped or impeded by *what is*

[1] *Cf.* also *Rep.*, 588 B; *Phædrus*, 237 E.
[2] *Cf. ibid.*, 441 E.
[3] *Ibid.*, 442 B and C, and 444 B.
[4] *Cf. ibid.*, ix., 582 A, B.
[5] *Cf. Tim.*, 90 C.
[6] *Rep.*, iv., 443 B.
[7] *Ibid.*, 586 D.
[8] *Cf. ibid.*, 437 B, 580 D, 571 B.
[9] *Tim.*, 88 B.
[10] *Politicus*, 272 E.
[11] *Laws*, x., 904 C. *ὅπῃ γὰρ ἂν ἐπιθυμῇ. . . .*
[12] *Ibid.*, x., 904 C. *φέρεται κατὰ τὴν τῆς εἱμαρμένης τάξιν.*

*given* (a sense sometimes identified by Plato with *μνήμη* [1]), is therefore implied in all the processes of assimilation, and constitutes *pleasure* and *pain*.[2] These are themselves aspects of activity, of movement,—*κίνησις*,[3] *γένεσις*,[4] as Plato says; desire and aversion, pleasure and pain are terms alike descriptive of the impulse implied in *ψυχῆς φύσις*.[5] Pleasure may be regarded as in so far a *realisation of activity*,[6] the latent impulse[7] finding its direction;[6] but the process of selection is seen to imply rejection, desire implies aversion, pleasure implies pain,[8] and it is here that the directing force of environment finds place. It is from without that the first checking of the activity[9] must come that it may direct itself into new channels.[10] The growing mind must be trained to "draw from this source only when and how much it ought".[11] This is something of what Plato means by calling pleasure *ἄπειρος* [12]—it is the unchecked, the 'limitless' activity of soul.

## Appetite.

It is true there is an innate balance of activity; appetite, which is its first and lowest aspect, is by nature intermittent, giving therefore room for development in other directions.[13] But if these other forms of activity fail of their appropriate nourishment they will not be realised,[14] *i.e.*, pleasure will not arise through them, and this leads to the unnatural[15] and 'untrue,' because disproportionate,[16] direction of activity in the one direction in which it finds realisation. The mere fact of the intermittence of appetite shows the incompleteness of its character as an activity,[17] *ἀτελής*.[18] A mind thus conditioned is "like a vessel full of holes," [19] a constant succession of "emptyings and fillings" [20]—a state diseased [21] because abnormal, "contrary to nature"—*παρὰ φύσιν* (*Phædrus*, 251 A). This much then becomes clear,

[1] *Philebus*, 35 C. [2] *Ibid.*, 35 D; *Rep.*, ix., 585 D.
[3] *Rep.*, 583 E. [4] *Philebus*, 53 C.
[5] *Cf. Rep.*, 580 D. [6] *Tim.*, 81 E; *Philebus*, 31 D.
[7] *Cf. Phædrus*, 237 D. *ἔμφυτος ἐπιθυμία.*
[8] *Philebus*, 36 B; *Cf.* also *Rep.*, ix., 584 C.
[9] *Rep.*, viii., 559 B.
[10] *Cf. Laws*, i., 642 A (of the exposition of the right use of drinking), *ἡ κατὰ φύσιν αὐτοῦ διόρθωσις κ.τ.λ.*
[11] *Ibid.*, i., 636 D. [12] *Philebus*, 31 A. [13] *Tim.*, 72 E.
[14] *Ibid.*, 44 B, C. [15] *Phædrus*, 251 A.
[16] This is shown by contrast with the state of true pleasure, *Rep.*, ix., 586 E. *Cf.* above, 586 A, and *cf. Tim.*, 86 B.
[17] *Cf. Rep.*, viii., 586 B. [18] *Tim.*, 44 B. [19] *Gorgias*, 493 B.
[20] *Phil.*, 35 E. [21] *Tim.*, 86 B.

that the congenial environment for the development of the soul's 'nature' is one that supplies a due admixture of pleasure and pain,[1] *i.e.*, the due stimulation and suppression of the different forms of activity. The proper balance of pleasure will imply always the proper harmony of activity, and *vice versa*. In pleasure the direction of activity is at once realised and *confirmed*. This *formation of habit* is one aspect of assimilation; it is this which gives pleasure such an important place in education.[2]

It is so far evident that Plato finds appetite to be one characteristic form of mental activity, but to be regarded as the lowest, the least true[3] (so *ἀλόγιστον*) (the nature of Truth, of Reality, being always the harmonious, the self-consistent), since it has no unity or stability about it,[4] no appearance of a guiding principle. It has to find its proper limits, its 'fated' or 'necessary'[5] scope and direction largely through habituation and training.[6] It is only as "necessary" that this kind of pleasure, Plato says, can approach the true.[7] When this condition is insured, the nature of the mind will be free to assert itself in the further development of a higher and more complete activity.[8]

### Emotion. (*a*) *θυμός*, (*b*) *ἔρως*, (*c*) *δόξα*.

(*a*) The clue to this more complete activity is to be found no longer in the blind processes of nutrition and growth as presented in the plant,[9] but rather in the form of activity peculiar to animals and man.[10] In spontaneous bodily movement, so specially characteristic of all young creatures, and, when unimpeded, realising itself in pleasure—it is in this that Plato finds the germ of a pleasure, an activity, eventually peculiar to man. For man, unlike other animals, realises his movements in rhythm; he alone, "dance-fellow of the gods," finds his pleasure in harmony. To this pleasure, rightly called "æsthetic," all his senses contribute. Here there is abundant scope for the training by habit. Through eye and ear and every sense the environment must conduce to evoke this activity to pleasure—an activity which, as it is distinctively human, can be developed only by specific

[1] *Laws*, ii., 653. [2] *Ibid.*, ii., 653.
[3] *Rep.*, 439 D, 589 E, also 585 D. [4] *Ibid.*, 588 C.
[5] *Ibid.*, viii., 558 D. [6] *Ibid.*, ix., 589 B; *Laws*, i., 635 C.
[7] *Cf. Philebus*, 62 E, where the question is, what pleasures can consort with wisdom.
[8] So *ibid.*, 63—the objection raised by wisdom to excessive pleasures.
[9] *Cf. Tim.*, 77 B. [10] *Laws*, ii., 653 E.

human co-operation.[1] In fine, as these stirrings of life are the germ of the rhythmic movements of dance and song, so it is music and art that must supply their appropriate nourishment.[2] The æsthetic activity becomes assimilative through imitation [3]—it is at once a power of movement and a capacity for being moved,[4] its very receptivity marks it as emotional (*ἀγανακτητικόν*, *Rep.*, 604 E, 605 A).

Art "holds the mirror up to nature". It selects and presents to us 'images' of our own activity (Homer is *εἰδώλου δημιουργός*, *Rep.*, 599 D), and so enables us to find expression,[5] to project ourselves, as it were, on external nature; and this realisation *is* pleasure—*πολὺ γλυκίων μέλιτος*.[6] Hence it is above all things necessary that the selection should be appropriate, should be *κατὰ φύσιν*, *i.e.*, should present unity, consistency, simplicity,[7] and so induce through imitation a corresponding balance and harmony, *εὐήθεια*, not *κακοήθεια*. For as long as emotion works in the direction of mere movement, for the mere pleasure of activity, the joy of existence [8]—as long as it is the lawless "boiling" or "seething" of the life within [9]—it has not reached its distinctively human development. It is indeed the expression of a self (the "manly" quality, as Plato calls it [10]), and, if it meets with resistance, of self as opposed to others [11]—this is the characteristic of emotion (*θυμός*) even in animals [12]—but only when reduced to order [13] does it become the expression of self [14] as subject to a law, as part in a whole, *i.e.*, in harmony with others.[15]

Art should by its 'images' be the exponent of this order [16] —its function is to check the exuberance, the multiplicity, of activity, in order to bring it into line with its true development.[17] Here again it is a question of a due balance of pleasure and pain.[18] In the constant insistence on simplicity in all art (*cf. Laws*, 656), especially in music, Plato seems to feel the tendency of emotion to run to waste, if it is not checked, *i.e.*, if art fosters merely intensity of pleasure

[1] *Rep.*, iii., 401 C. [2] *Laws*, ii., 654 A; *Rep.*, iii., 401 A.
[3] *Rep.*, iii., 401 D, and 401 E. *Cf.* also *Rep.*, vi., 500 C.
[4] *Ibid.*, x., 605 A; and below, 606 A. [5] *Ion.*, 535 C.
[6] *Philebus*, 47 E. [7] *Cf.* again *Rep.*, iii., 400 E; and below, 401 A.
[8] *Cf. Phædrus*, 251 A. [9] *Cratylus*, 419 E. [10] *Rep.*, iv., 442 C.
[11] *Ibid.*, iv., 440 C. [12] *Ibid.*, iv., 441 B.
[13] *Ibid.*, iv., 441 E. [14] *Ibid.*, ix., 589 A.
[15] *Ibid.*, iv., 441 D. For such a harmony as *community of feeling*, bk. v., 464 A.
[16] *Laws*, ii., 656 D. [17] *Rep.*, iv., 442 A.
[18] *Cf. Laws*, ii., 659; also *Timæus*, 47 D; and again in *Laws*, ii., 659 E.

apart from balance.[1] As always, he finds pleasure to be "without limit," and art is condemned in so far as it fails to correct this (*cf. Republic*, 605 B, *τῷ ἀνοήτῳ χαριζόμενον καὶ οὔτε τὰ μείζω οὔτε τὰ ἐλάττω διαγιγνώσκοντι*), weakens in fact the natural, inherent balance. For instance, in *Republic*, book x.,[2] tragedy is accused of inducing a man to feel pleasure in, *i.e.* to indulge, a form of emotion he would otherwise feel ashamed of (*οἷον μὴ ἀξιοῖ εἶναι ἀλλ' αἰσχύνοιτ' ἄν*). By thus removing a check to activity it increases pleasure, but at the same time, by destroying the sense of rhythm, it perverts the activity from its natural development.[3] In fact it upsets the balance of the mind altogether,[4] fostering excessive desire in every form (*τρέφει γάρ πάντα ἄρδουσα*), since pleasure and pain are coextensive with activity itself (*πάσῃ πράξει ἕπεσθαι*); and all this art can do because of the imitative power of emotion (*πολλὴν μίμησιν καὶ ποικίλην ἔχει*[5].) (604 D).

Emotion is as it were the plasticity of the soul. So Plato talks of the "tender souls of children,"[6] so easily deformed and distorted, like "blocks of wax"[7] ready to take any impression.[8] If the impression fails to coincide, if imitation is constantly given fresh direction instead of being reinforced by habit,[9] chaos must ensue. Hence the danger of "innovation"[10] (*νεωτερισμός*). Rhythm is the opposite of this, and its antidote, since it implies a constant repetition, a recurrence of a particular form of activity, and so sets limits to change. The fact that the sense of rhythm is latent in the emotional activity implies a *tendency in the soul towards good habit*, in that it welcomes what is familiar[11]—a characteristic even of animal emotion, Plato finds, in its higher forms, *e.g.*, in the case of the dog.[12] (Here may be found another trace of the beginnings of memory—see above, on p. 55.) And this again is a reason why *play* presents such a powerful means of education. Play is just another name for the impulse to movement in young creatures, an activity for the sake of activity, or, as Plato puts it, movement prompted solely by pleasure.[13] This proceeds by imitation,[14] and, given appropriate—*i.e.*, permanent and consistent—objects, will de-

[1] *Cf. Laws*, ii., 659 D; *Tim.*, 47 D. [2] *Rep.*, x., 605 E.
[3] *Ibid.*, x., 606 A; *Tim.*, 69 D, where *ἡδονὴ* is *μέγιστον κακοῦ δέλεαρ*.
[4] *Rep.*, x., 606 D. [5] *Cf.* also 606 B, and bk. iii., 395 C.
[6] *Laws*, ii., 664 B; *Theætetus*, 173 A. [7] *Theætetus*, 191 B.
[8] *Cf. Laws*, vii., 792 E; also *Rep.*, iii., 395 D. [9] *Laws*, ii., 655 E.
[10] *Cf. Rep.*, viii., 555 D, of the citizens in a state of mutual hatred and discord, *νεωτερισμοῦ ἐρῶντες*; and for its cure *cf. Laws*, ii., 657 B; also *Rep.*, iv., 424 B.
[11] *Rep.*, iii., 402 A. [12] *Ibid.*, ii., 375 E. [13] *Cf. Laws*, ii., 667 E.
[14] *Cf. Rep.*, iv., 424 D.

velop into a pleasure in what is familiar (this is *εὐνομία*).[1] Thus by habit a tendency is fostered which, though not yet conscious (for "youth is far from the truth"[2]), is yet "aiming at a mark" (*τόξου βολή*[3]). This, which appears first as opinion, *e.g.*, in regard to pleasures and pains (*cf. Rep.*, 429 B, C), may become so fixed, colouring the mind like a fast dye,[4] as to amount to determination or resolution.[5] Such a development can obviously take place only in an ordered and settled community where the desire for innovation is excluded and the pleasure of one is the pleasure of all.[6]

Yet even under such conditions emotional activity remains at best true to its original character—instinctive, since it is given at birth[7] and before man "has acquired his own proper sense".[8] It is concerned with the senses[9] (*ἄλογος* therefore), and, being thus dependent on "images" so various, even as more or less systematised by art, it has a corresponding nature, various (*e.g.* "the lion and serpent"[10] in the *Republic*), many-coloured (*παντοδαπός*, *ποικίλος*), shifting, unstable. This gives it an unreality; its pleasures are shadowy,[11] changeful, not pure and simple,[12] the unity at which, through art,[13] it should be aiming is still so far off that the state is apt to be one of dizziness and dimness. Habit or opinion based on the balance of pleasure and pain is at best an unstable basis.[14]

Emotion has, indeed, as has been said already, a certain restraining power[15]—a man may be led by his "dramatic instinct" to subordinate private to public interests[16] (*φιλοτιμία*)[17]—but even so, it is *instinct*, not knowledge,[18] he is guided by no clear principle (*οὔτε τὰ μέιζω οὔτε τὰ ἐλάττω*

[1] *Rep.*, 425 A.
[2] *Sophist*, 234 D. *Cf. Rep.*, x., 605 C, of the imitative artist.
[3] *Cf. Cratylus*, 420 C. [4] *Rep.*, iv., 429 D, E.
[5] *Ibid.*, 412 E; note also Jowett's translation here of *δόγμα* or *δόξα* as "resolution". *Cf. Thæt.*, 190 A; also *Polit.*, 309 C.
[6] *Rep.*, v., 462 B. *Cf.* with this the contrary state described in bk. viii., 555 D (mentioned above, see page 58, note 10).
[7] *Ibid.*, iv., 441 A. [8] *Laws*, ii., 672 B, C.
[9] *Cf. Theætetus*, 186 C; and below, 202 B. [10] *Rep.*, ix., 590 B.
[11] *Philebus*, 40 B; *Rep.*, ix., 587 D. *Cf.* also above, 586 B.
[12] *Rep.*, 583 B.
[13] And *cf. Laws*, 668 A, of art. So in *Phædrus*, 250 B. *δι' ἀμυδρῶν ὀργάνων ἐπὶ τὰς εἰκόνας ἰόντες.*
[14] So in *Laws*, ii., 663 B.
[15] *E.g.*, of a certain kind of fear. *Laws*, i., 647 A, and *Rep.*, 465 B (bk. v.).
[16] *Cf. Rep.*, viii., 554 D. [17] *Ibid.*, viii., 550 B.
[18] *Cf. ibid.*, viii., 548 B. *ὥσπερ παῖδες πατέρα τὸν νόμον ἀποδιδράσκοντες*, etc.

διαγιγνώσκοντι), only by an impulse (ὁρμή) of self-interest[1] (αὐθάδης, 548 E).

It now has to be shown from another point of view how this emotional element grows and develops into something higher and better because more inclusive and complete and harmonious.[2] Under this aspect it is called by Plato ἔρως.

(*b*) In ἔρως[3] are seen again, though in a new light, the characteristics of θυμός: ἔρως too is essentially a self-feeling and, as self-assertion, would project itself, would find its own likeness in its surroundings.[4] So in Aristophanes' fable it goes about seeking its own completion, its 'other half'.[5] So in the *Symposium* it is seen to aim especially at production.[6] In this sense indeed it is shared to a certain degree by the lower animals,[7] as was θυμός, yet as the human factor in θυμός was the perception of rhythm, so ἔρως desires (says Socrates, correcting Aristophanes) not only its own completion, but what is *good*[8] (that is, for Plato, the harmonious). So for production the condition is a certain harmony,[9] just as rhythm was the attendant condition of pleasurable movement. The desire for immortality[10] which characterises ἔρως in the *Symposium* is seen to be rooted in the same feeling as φιλοτιμία,[11] the characteristic of θυμός in the *Republic*. So ἔρως like θυμός[12] is at the root of all creative art.[13] As θυμός issued in δόξα so ἔρως holding "the place between,"[14] as Socrates says in the *Symposium*, corresponds to opinion (δόξα) which lies between knowledge and ignorance. In fact θυμός itself in the *Republic* is seen to occupy this middle place[15]—just as ἔρως partakes of the nature of desire and yet aims at something beyond itself, so θυμός lies between τὸ ἐπιθυμητικόν and the higher element τὸ λογιστικόν, to which nevertheless it is by nature an ally (ἐπίκουρον ὂν φύσει).

In the *Phædrus* Plato has set forth at length, in mythical form, this mixed nature of emotion. There[16] the discussion starts from the notion of the 'movement,' the motive aspect of the soul (κινήσεως ἀρχὴ τὸ αὐτὸ αὑτὸ κίνοῦν). This idea is elaborated in the picture of the "mixed nature of the winged horses and charioteer".[17] Here the impulse

[1] *Rep.*, ix., 581 A, B. [2] *Timæus*, 80 B.
[3] ἔρως is also ἐπιθυμία; *Symposium*, 200 A, and below, 200 E.
[4] *Lysis.*, 221 E, 222 A. [5] *Symposium*, 192 E.
[6] *Ibid.*, 206 C. [7] *Ibid.*, 207 B, C, D. [8] *Ibid.*, 205 E.
[9] *Ibid.*, 206 D. [10] *Ibid.*, 207 A. [11] *Ibid.*, 208 B and E.
[12] *Rep.*, x., 605 A.
[13] *I.e.*, as the instinct of production; *Symposium*, 209 A.
[14] *Symposium*, 202 A. *Cf.* also *Rep.*, v., 478 E.
[15] *Rep.*, iv., 441 A. [16] *Phædrus*, 245 C. [17] *Ibid.*, 246 A.

towards something higher, the winged steed, is joined to, and weighed down by, the heavier earthy element of mere appetite (*τὸ ἐμβριθέστερον*). Were it free to soar, the higher would rise to the "region of the divine" (*ᾗ τὸ τῶν θεῶν γένος οἰκεῖ*), and there find its appropriate nourishment.[1] Rising altogether beyond the regions and relativities of sense where all is change and a process of "becoming," it would partake of absolute "being" (*οὐσία*);[2] it would cease to be individual, a part, and would include the whole within itself, would be in fact the harmony of the whole (*πάντα τὸν κόσμον διοικεῖ*).[3]

Thus in impassioned vision Plato seems to see the glorious destiny of mind; but coming back to its human conditions he finds there inevitable limitations. It is, in fact, the myth seems to suggest, just through such limitations, arising in some failure of the soul's own powers,[4] that its human existence has its origin—an existence involving body and the use of sense, and so entailing, as we saw, a necessary dependence on surroundings, and consequent possibilities of misdirection.[5] It becomes almost impossible that any sense of the whole should be maintained[6] (see above, p. 57, for the insistence on some such wholeness in art and the training of sense), and in this failure *self-assertion—i.e.*, the insistence on the undue development of a part—means discord. In the myth the gods are seen to be free from such error—*φθόνος γὰρ ἔξω θείου χοροῦ ἵσταται*—and so their vision is unhindered, whereas the human soul is fatally impeded by it (*πατοῦσαι ἀλλήλας καὶ ἐπιβάλλουσαι ἑτέρα πρὸ τῆς ἑτέρας πειρωμένη γενέσθαι*), *i.e.*, by the absence of that *κοινωνία* maintained in the *Republic* to be a necessary bond of union, and the presence of *φιλοτιμία*,[7] *φιλονικία*.

The result is presented as, at best, a compromise.[8] Emotion being of the mixed nature must work through the senses,[9] and by mere "appearance" (*δόξα*) and after all find its nourishment (*τροφὴ δοξαστή*) in the world of appearance. Yet emotion nevertheless carries within it this craving, this impulse after something beyond sight and sense, the "winged nature". How shall such a nature develop out of the mixed (*τὸ ξύμφυτον*) so that instead of two there shall be in effect one?

[1] *Phædrus*, 246 E. [2] *Ibid.*, 247 E. [3] *Ibid.*, 246 C.
[4] *Ibid.*, 248 C. [5] *Ibid.*, 250 A. [6] *Ibid.*, 248 A.
[7] *Ibid.*, 253 E, even the good steed is *τιμῆς ἐραστής*, but *μετὰ σωφροσύνης τε καὶ αἰδοῦς*.
[8] *Ibid.*, 248 B. *Cf.* also 253 D, *ἀληθινῆς δόξης ἑταῖρος*.
[9] *Cf. ibid.*, 250 B.

The element of unity required is indicated in the myth by the "charioteer" who stands for reason (λόγος).[1] Without him the nobler steed is powerless to check the baser [2]—as θυμός is in its nature not a ruler but only a subject, an ally, of reason [3] (προσήκει ὑπηκόῳ εἶναι καὶ ξυμμάχῳ τούτου)—and the same cause is assigned in the *Republic* as in the *Phædrus*, *viz.*, that reason alone can grasp the whole.

There is one form of emotion, one use of sense, which conduces, Plato says, more than any other to the development of reason, *viz.*, the love of beauty, the sense of sight,[4]—though even this, he says here, and more explicitly in the *Republic*, is not in itself sufficient to grasp reality (ἡ φρόνησις οὐχ ὁρᾶται). In the figurative language of the *Phædrus* it is beauty that is most like the reality [5] partaken of by soul in its divine condition and therefore most capable of exciting "recollection" of it.[6] In other words, it is through sight and the love of beauty that the mind can come to a knowledge of its own nature (φύσις) and so, effectively, aim at its realisation. In the myth it is beauty, and the love of beauty, that quickens the growth of the wing [7] (ἀναπτερῶσαν τὰς διόδους τῶν πτερῶν); the beloved, when inspired by love, "sees himself as in a mirror" though he knows it not (ὥσπερ ἐν κατόπτρῳ ἐν τῷ ἐρῶντι ἑαυτὸν ὁρῶν λέληθε), and so it is the person corresponding to his own individual and innate φύσις that each is impelled to love—τὸν Ἔρωτα τῶν καλῶν πρὸς τρόπου ἐκλέγεται ἕκαστος [8]—(as in the myth it is the character nearest to the God whom the soul once followed that it chooses and by imitation becomes like, καθ' ἕκαστον θεὸν, οὗ ἕκαστος ἦν χορευτής,[9] ἐκεῖνον τιμῶν τε καὶ μιμούμενος εἰς τὸ δυνατὸν ζῇ). Here, as always, emotion works by imitation, but in so far as this is unconscious of itself (ἑαυτὸν ὁρῶν λέληθε)[10] it fails to become anything more, it fails to excite conscious recollection, to bring before the mind the "divine" perfection of which the beautiful object is but a copy. The love of beauty is in Plato's phrase a beginning of "the heavenward pilgrimage" (κατηργμένοι τῆς ὑπουρανίου πορείας, *Phædrus*, 256 D), but if it fails to arouse reason it ends only in the state of compromise,[11] in the region of opinion; self-assertion does not become self-realisation (διαίτῃ φιλοτίμῳ

[1] *Phædrus*, 253 E, λόγῳ ἡνιοχεῖται. [2] *Ibid.*, 256 A.
[3] *Rep.*, iv., 441 E; *Phædrus*, 247 D. [4] *Phædrus*, 250 D.
[5] *Ibid.*, 250 B. [6] *Ibid.*, 251 A, 249 C.
[7] *Ibid.*, 251 B. [8] *Ibid.*, 252 D.
[9] *Cf. Laws*, ii., 654 A, τοὺς θεοὺς συγχορευτάς, and above, p. 56.
[10] *Cf. Rep.*, iii., 401 D and 402 A, πρὶν λόγον δυνατὸν εἶναι λαβεῖν.
[11] *Phædrus*, 256 B. C.

χρήσωνται), the parts are not united into a whole (οὐ πάσῃ δεδογμένα τῇ διανοίᾳ πράττοντες), the self is not its own master and therefore not harmonious (ἐγκρατεῖς αὑτῶν καὶ κόσμιοι) and reduced to order (τεταγμένοι).[1] Precisely the same idea recurs in the *Symposium*. There too ἔρως is a process of finding and reproducing the self in what is beautiful.[2] There too is an ascent[3] (ἐπανιέναι) through the power of sight and the love of beauty, from objects and individuals, shifting appearances[4] and images, to thoughts, to the recognition of beauty in act and word, until the absolute unchanging essence,[5] the "whole" of it be attained. In effect it is the development of reason, the power (latent, says Plato, in all human souls[6]) of "going from the many particulars of sense to the one universal of reason".[7] This power is fully developed in very few minds.[8] The majority therefore are found to be in a kind of transition state, showing at different stages the greater or less ascendancy of the emotional element in mental activity. The enumeration of types in the *Phædrus*[9] may be thus taken as an illustration of the ἐπαναβαθμοί of the *Symposium* and as furnishing instructive examples of Plato's power of psychological analysis.

First[10] come instances of the "few" who have attained the fuller development, the lover of wisdom, and the lover of the beautiful. In them love, ἔρως, has developed into knowledge. The artist too (μουσικός) has a grasp of the ideal and so belongs to this highest class. But after these follow characters of a lower type, in all of whom θυμός may be traced as on the whole predominant.

The first is the law-abiding king. This is hardly the "kingly" character of the *Republic*, but rather the kind of ruler demanded by the law-giver in book iv. of the *Laws*.[11] Asked "What are the conditions which you require in a state before you can organise it?" the law-giver answers, "Give me a state which is governed by a tyrant, and let the tyrant be young and have a good memory; let him be quick at learning, and of a courageous and noble nature: let him have that quality which is the inseparable companion of all the other parts of virtue, if there is to be any good in them". This is explained to be "temperance," but in this case only

[1] Contrast with this the condition described in *Phædrus*, 256 A.
[2] *Symposium*, 209 B. [3] *Ibid.*, 211 B. [4] 211 A.
[5] 211 D. [6] *Phædrus*, 249 B. [7] *Ibid.*
[8] *Ibid.*, 250 A, οὐ ῥᾴδιον ἁπάσῃ; *Rep.*, vi., 491 A; *Timæus*, 51 E *Cf.* also *Laws*, ii., 653 A; *Rep.*, vii., 517 B, and iv., 441 A, B.
[9] *Phædrus*, 248 D. [10] *Ibid.*, 248 D.
[11] *Laws*, iv., 709 E (see Jowett's translation).

"in the vulgar sense" (*δημώδης*), *viz.*, "*that which is the natural gift of children and animals*"—a character expressed almost in the very words used in describing *θυμός* in the *Republic*.

Bracketed with this kind of ruler we find in the *Phædrus* *βασιλεὺς πολεμικὸς καὶ ἀρχικός*. the "warrior-chief" as he has been called; one in whom clearly the "manly" quality is the leading characteristic.

The third class[1] is described by three adjectives, *πολιτικός*, *οἰκονομικός*, *χρηματιστικός*. It consists apparently of persons who make a career in politics or commerce, who possess in fact "public spirit" and are moved by a desire of fame or wealth—*φιλοτιμία*, *φιλονικία*—characters familiar enough in the *Republic*,[2] and there recognised as not possessing "the instrument of judgment" and so still subject to the guidance of emotion. The fourth kind is represented by the athlete (*γυμναστικός*), the man concerned with "the care of the body". It is the special mark of "Gymnastic" in the *Republic*[3] that it extends and, if exclusively pursued, may unduly develop, the "wild beast" element—emotional activity in the form of anger or resentment.

Fifth is the life of the seer or the initiated—*μαντικὸς βίος ἤ τις τελεστικός*. Now Plato's view of this character is a curious and well-marked one; it is a kind of humorous mixture of reverence and contempt—reverence for the utterances of truth, and contempt for the witlessness of those who give them voice. Such persons, he says, are reckoned to have something divine about them;[4] whereas his own contention is always that it is the opposite character, *viz.* absolute intelligibility, that may be rightly conceived to constitute the "divine," since it also constitutes reality.[5] So for Plato divination is the "gift of God to human folly,"[6] and the seer stands for the person who does right without knowing why, carried along by opinion (*εὐδοξία*) or the mere force of emotion (the *μανία* of the *Phædrus*); that is to say, ruled by *θυμός*.[7]

In the sixth grade are found the poet and "imitator". This is the lower kind of artist referred to in the *Republic*[8] as appealing specially to that capacity which lends itself so

[1] *Phædrus*, 248 B. [2] *Rep.*, ix., 582 D. [3] *Ibid.*, iii., 410 D.

[4] *Meno*, 99 C, and 99 E; and in *Phædrus*, 244 C, *μαντική* is derived from *μανική*—*ὡς καλοῦ ὄντος, ὅταν θεία μοίρα, γίγνηται.*

[5] *Cf. Rep.*, v., 477 A, and *Sophist*, 248 D, *τὴν μέν ψυχὴν γιγνώσκειν, τὴν δὲ οὐσίαν γιγνώσκεσθαι.*

[6] *Timæus*, 71 E.

[7] *Meno*, 99 C. It is noticeable that here as in the *Phædrus* (the third class) the *πολιτικός* is classed as akin to the seer. *Cf.* also *Phædrus*, 244 B.

[8] *Rep.*, x., 605 A.

well to imitation, *viz.* emotion,—*τὸ ἀγανακτητικόν, τὸ θυμοειδές*. His relation to the previous class, the inspired seers, is indicated in the *Apology*[1] where Socrates declares that poets also "do what they do not by wisdom but by a kind of nature through inspiration".

In the *Apology*, moreover, another class is found closely allied to the poets through this very lack of self-knowledge, *viz.* the craftsmen.[2] And they occupy a corresponding place in the *Phædrus* being found in the next, the seventh, class along with *οἱ γεωργικοί*. These two kinds of manual work or "production" are found side by side again in the *Sophist*, where husbandry is included with plastic and "imitative" arts under the general head of art which is "creative" (*ποιητική*).[3] Whether therefore regarded as "imitative" or as resting merely upon a kind of habitual dexterity which is second nature,[4] these arts are concerned only with phenomena,[5] and do not lead from "the many particulars of sense to the one universal of reason," and so those who pursue them exercise not reason but *θυμός*.

That the Sophist and the demagogue of the eighth class are closely akin may be judged from the passage in the *Republic*,[6] where the former are found pandering to the opinions of the multitude as though to "the passions of some great beast"; but their true relationship is more accurately shown in the dialogue called the *Sophist*.

Here[7] the argument, after labyrinthine wanderings, issues in the conclusion that the sophist is not only an imitator following opinion instead of knowledge (*δοξομιμητής*), but one who has some suspicion of his own state, and so is a dissembler (*εἰρωνικὸς μιμητής*).[8] This character he shares with the demagogue, the only difference being that the latter practises his arts on multitudes and in public, the former only in private.[9] So both are of those who nourish, and are nourished, by *τροφὴ δοξαστή*, and attain not to the higher place of the ideal.

The ninth class, the last and lowest of these mental types, is represented by the tyrant. In the *Republic*[10] Plato has portrayed him in lurid colours. He answers to the soul in which the charioteer has lost control,[11] and the baser of the two steeds, *ὕβρεως καὶ ἀλαζονείας ἑταῖρος*, has it all his own way (*σκιρτῶν βίᾳ φέρεται*). In such a man *ἔρως*,[12] if it can

[1] *Apol.*, 22 C. [2] *Ibid.*, 22 D. [3] *Sophist*, 219 B.
[4] *Cf. Rep.*, iii., 395 D. [5] *Ibid.*, x., 597 A. [6] *Ibid.*, vi., 493 A.
[7] *Sophist*, 267 E. [8] *Ibid.*, 268 A. [9] *Ibid.*, 268 B.
[10] *Rep.*, ix., 573. [11] *Ibid.*, ix., 571 C.
[12] *Ibid.*, ix., 572 E, 574 E.

still be called so, reigns unbridled by reason or any touch of the ideal; pictured by Plato as the "great winged drone" it becomes a horrible travesty of the winged creature, the enlightened ἔρως of the *Phædrus*.

The emotional activity of the soul has been seen to be concerned with sense [1] and yet tending always to pass beyond sense—beyond itself—into a different and higher, because more inclusive, form of activity. ἔρως is essentially an impulse, apt, in appropriate surroundings, to develop the true φύσις, yet liable also to misdirection—capable of rising into φιλομαθία, or of remaining no more than φιλονικία.[2] It thus occupies the borderland, τὰ μεταξύ, between the world of sense and the world of thought.[3] There is no hard and fast line between the emotional and the reasoning activity, but until the latter emerges the mind is not full grown, does not exist as a unity, whole and complete. Reason appears from this point of view as the outcome of δόξα; that is to say, the image or *appearance* of unity reflected on the mind from without at last becomes imprinted on it (καταδύεται εἰς τὸ ἐντὸς τῆς ψυχῆς).[4] and so by reason of constant care and tendance (θεραπεία)[5] becomes realised—the god, as Plato would say, dwelling within, obtains recognition.

As ἔρως or θυμός expresses the nature of this transition state viewed from the side of desire, so its condition viewed from the side of knowledge is expressed by δόξα.[6]

(*c*) The mixed nature of δόξα appears in the *Sophist*[7] and in the *Theætetus*.[8] There it has on the one hand all the aspect of a reasoned conclusion (διανοίας ἀποτελεύτησις); when the soul has been conversing with herself (διάνοια) the "silent affirmation or denial" which results is called δόξα. Yet on the other hand it is seen also working through sense and issuing in "phantasy"[9] that is "image-making" (not necessarily limited like our word "imagination" to representation, but including also presentation or perception—*cf.*[10] below 266—τὸ φανταστικόν is a branch of εἰδωλοποιική).

Earlier in the same dialogue[11] δόξα appears as a spurious form of thought, the result of false reasoning, produced by imitative arts, as *e.g.* in the young, who being "far from the truth" are misled by their senses (διὰ τῶν ὤτων τοῖς λόγοις γοητεύειν) and have no hold on reality (τῶν ὄντων ἐφάπτεσθαι).

The characteristic of δόξα is that it is incomplete and contradictory, and does not tally with facts (ἀνατετράφθαι

[1] *Cf. Theætetus*, 179 C. [2] *Timæus*, 90 B. [3] *Cf. Theæt.*, 179 C.
[4] *Rep.*, iii., 401 D. [5] *Cf. Timæus*, 90 C. [6] *Symposium*, 202 A, D.
[7] *Sophist*, 263 E, 264 A, B. [8] *Theæt.*, 190 A. [9] *Sophist*, 264 A.
[10] *Ibid.*, 266 E. [11] *Ibid.*, 234 B, C.

*ὑπὸ τῶν ἐν ταῖς πράξεσιν ἔργων παραγενομένων*). So in the *Republic*[1] it is seen to include these same two elements, the "faculty of proceeding by likenesses" (*εἰκασία*), and "belief" (*πίστις*), and, as being concerned only with the shifting (*γένεσις*) not with the permanent, to be inferior to *διάνοια*. Again, in the *Theætetus*,[2] it is compared to "an image seen in a mirror," or to likenesses judged at a distance, matters in which one is liable to make mistakes, *e.g.* confusing left and right, like "putting the right shoe on the left foot" (*ὥσπερ οἱ ἔμπαλιν ὑποδούμενοι*).[3] Here too its mixed nature appears, concerned, as in the *Sophist*, both with knowledge (or thought, *διάνοια*) and with sense (*περὶ ὧν ἴσμεν τε καὶ αἰσθανόμεθα*). It is here that it is presented as an "impression from without,"[4] as has been said before, dependent for its result on the receptivity of the mind itself.

In regard to its connexion with *διάνοια* or knowledge a difficulty arises, akin to that in book v. of the *Republic*,[5] where opinion is seen to be neither knowledge nor ignorance (*τὸ μεταξὺ ἀγνοίας καὶ ἐπιστήμης*). There seems to be a contradiction between error (admitted by opinion) and knowledge. In the *Republic* (477 D and following) the explanation offered is the one already indicated, *viz.* that knowledge and opinion are two different forms of activity (*δυνάμεις*), and so directed to different objects.[6] The object of knowledge is what *is* (*τὸ ὄν*),[7] unchanging and permanent, distinguished by its unity and simplicity (*τὸ εἰλικρινῶς ὄν*)[8]; that of opinion (since it cannot be the non-existent) is of a mixed nature, shifting, manifold,[9] so that what it is at one time it is not at another (*ἅμα ὄν τε καὶ μὴ ὄν*).[10] This shifting diverse character reappears in the *Theætetus* in Plato's simile of birds in an aviary.[11] Each opinion or piece of knowledge acquired is like a bird put into the cage.[12] In time a heterogeneous collection is gathered there—in one sense the mind may be said to possess them, yet in another sense not (*τρόπον μὲν γὰρ ἄν πού τινα φαῖμεν αὐτὸν αὐτὰς ἀεὶ ἔχειν . . . τρόπον δέ γ' ἄλλον οὐδεμίαν ἔχειν*), for so long as one "tries to catch a pigeon and gets a ring-dove by mistake,"[13] one can scarcely be said to be master in one's own aviary. Some examination and classification is necessary; if the different species, for instance, were separated into their own flocks (*κατ' ἀγέλας*) and not fluttering about at random (*μόνας διὰ πασῶν ὅπῃ ἄν*

[1] *Rep.*, vii., 533 E. [2] *Theæt.*, 193 C. [3] *Ibid.*, 194 B.
[4] *Ibid.*, 194 C, D, 195 A. [5] *Rep.*, v., 477 E; *Theæt.*, 196 C.
[6] *Rep.*, v., 478 A, B. [7] *Ibid.*, 478 C. [8] *Ibid.*, 478 D.
[9] *Ibid.*, 479 B. [10] *Ibid.*, 478 D. [11] *Theæt.*, 197 E.
[12] *Ibid.* [13] *Ibid.*, 199 B.

τύχωσι πετομένας), there would be no difficulty in distinguishing them. There must be a review and organisation of opinions before they can develop into the permanence and unity of knowledge.[1] It is as though a man should first learn the name of each bird and then proceed to classify and so reason about the names (ὀνομάτων γάρ συμπλοκὴν εἶναι λόγου οὐσίαν);[2] just as in the case of words, the elements out of which they are composed are meaningless until united into syllables. In like manner the mind may possess all the elements, in the form of opinions (δόξαι) or impressions (αἰσθηταί), and yet, until it can fit these parts into a whole and see the meaning, the reason, of them, it does not "know" them. This confused unorganised nature of opinion explains its instability. In the *Republic*, book iii.,[3] it is described as liable to be "stolen" either by fraud or force (ἢ γοητευθέντες ἢ βιασθέντες). And the means of the theft as there enumerated are themselves a confirmation of the emotional character of δόξα. They are persuasion, forgetfulness, pain, pleasure, fear.

Persuasion, Plato finds, is specially effective with children[4] (in whom, as we have seen, θυμός is predominant).[5] It is an effect of conditions and environment; *e.g.* he declares that to *persuade* the young to good the law-giver must make the community unanimous.[6] This injunction is repeated in the *Laws* where persuasion is to take the form of *custom* and public opinion[7] (πείσει ἔθεσι καὶ ἐπαίνοις).

Forgetfulness again is characteristic of the "wild" element in the soul (τὸ ἄγριον). In the *Republic* it is the character described as δυσκοινώνητος καὶ ἄγρια that is "full of forgetfulness" and so "empty of knowledge" (λήθης πλεως, ἐπιστήμης κενός, *Rep.*, 486 C).

Lastly in regard to pain, pleasure,[8] fear[9] and the like, δόξα, being itself a result of the soul's receptivity, is found liable in its turn to be dislodged by emotional stimulus producing a contrary impression. This is Plato's reason for demanding that there shall be no inconsistency allowed for the young in such matters as pleasure,[10] pain, and fear,[11] that opinion instead of being shaken may be constantly confirmed. δόξα is, in fact, taste (τὸ τ' εὔσχημον καὶ ἄσχημον), and the stronger and more confirmed good taste becomes the

[1] *Cf. Theat.*, 202 B. [2] *Ibid.*, 202 B. [3] *Rep.*, iii., 413 A.
[4] *Laws*, ii., 663 E, 664 A. *Cf.* 664 B. [5] *Rep.*, iv., 441 A.
[6] *Laws*, 664 A. *Cf.* also *Rep.*, iii., 401. *Rep.*, vii., 519 E.
[7] *Laws*, ii., 663 B, C. [8] *Ibid.*, vii., 797 B. [9] *Ibid.*, vii., 791 B.
[10] *Ibid.*, vii., 791 B. [11] *Ibid.*, vii., 791 B.

less likely it is to be overthrown by any sudden access of passion or emotion.[1]

Yet even habitual good taste can never be regarded as in itself entirely stable or permanent; δόξα like ἔρως finds stability (βεβαίωσις) only in the presence of the higher, or, as Plato calls it, the "divine," "permanent," element (τὸ ἀειγενὲς ὂν τῆς ψυχῆς μέρος).[2] It may be said indeed to "foreshadow the march of the soul towards knowledge,"[3] and so it is that it sometimes appears as a sort of flash of divine intuition,[4] but such flashes are fugitive,[5] and if they issue in right action, it is none the less devoid of reason, unintelligent (νοῦν μὴ ἔχοντες).

The image by which Plato describes such intuitions in the *Meno* brings us back in idea to that of the *Theætetus*. As the birds fluttered about and refused to be caught so these "images of Dædalus" are "useless unless bound,"[6] for they "run away" and are lost (ἐὰν μὲν μὴ δεδεμένα ᾖ ἀποδιδράσκει καὶ δραπετεύει). As opinions had to be reviewed and organised, so here they must be bound by the "tie of the cause" (αἰτίας λογίσμῳ). This divine bond is reason, thought.[7] The soul's activity must be "turned back" upon itself,[8] and so becomes *reflection*, self-examination, that the mind may know itself and know what it is doing (γνῶναι τά τε αὑτοῦ καὶ ἑαυτόν). This is a different condition from that of the inspired persons of the *Meno* (99 C), who "say indeed much that is true but know nothing of what they say". In the *Philebus* this process of coming to oneself is connected with memory.[9] Memory is there the special pleasure of the soul itself, *i.e.*, the mark of a complete mental activity. Yet here a distinction becomes necessary[10]—μνήμη, the word used above for memory, means merely the duration of impressions of sense (σωτηρίαν αἰσθήσεως) and would therefore become the ground of associative knowledge (δόξα)—the sort of knowledge possessed by the "prisoners in the cave"[11] watching the images that passed before them and "remembering which of them generally came before or after others or at the same time". From this we must distinguish ἀνάμνησις,[12] recollection or

[1] *Cf. Laws*, i., 633 D. [2] *Politicus*, 309 C.
[3] *Cratylus*, 420 B. [4] *Meno*, 99 C.
[5] So above, *ibid.*, 97 E, 98 A, opinions are like the moving images of Dædalus.
[6] *Ibid.*, 97 E. [7] *Cf. Rep.*, vii., 518 E.
[8] So in *Theætetus*, 198 D, of the birds; also in *Timæus*, 71 E, where μαντική is discussed. See also 72 A.
[9] *Philebus*, 33 C. [10] *Ibid.*, 34 B.
[11] *Rep.*, vii., 516 C. *Cf.* Bosanquet, *Companion to Plato's Republic*.
[12] *Philebus*, 34 B.

reflexion in which the mind independent now of impressions of sense (*αὐτὴ ἐν ἑαυτῇ*), recalls and uses images, returning as it were upon herself.[1]

It is this self-awakening, this development of the final and complete activity of soul (*ἀρετὴ ψυχῆς*), that occupies so much attention in the *Republic*. It is called there a conversion (*περιαγωγή*)[2]—being not in fact an introduction of a new factor, but a direction and concentration of the activity (*δύναμις*) already existing, a process figured by Aristotle as the circle, the returning of the mind into itself (*cf.* Wallace, Aristotle's *Psychology*, page c, Introduction). Plato himself employs a similar image in book x. of the *Laws*[3] where, of the two kinds of motion, that which "moves in one place," *i.e.*, "must move about a centre like globes made in a lathe," is found to be "most entirely akin and similar to the circular movement of mind". But for him this movement also presents itself as an ascent—for instance in the *Symposium* (*ἐπαναβαθμοί*)—while in the *Republic*[4] it possesses both aspects in one—the prisoners in the cave must first turn round to the light and then struggle upwards towards it (*περιαγειν τὸν αὐχένα καὶ βαδίζειν*). The process, it is emphatically stated, is not an easy one; it is "no mere turning over of an oyster-shell" (*οὐκ ὀστράκου ἂν εἴη περιστροφή—Rep.*, 521 C), and this appears to be said rather as a criticism on the earlier scheme of education, as though the task had been there somewhat too lightly undertaken.[5] That education turns out to be not such as to lead to this result of conversion, to be directed in fact merely to the production of good habits. In so far it tends to harmony, yet it is a training of *θυμός* and *ἔρως* rather than of reason, and so is concerned with the appetites and emotions and the excellences connected with them.

And here, in the light of this criticism of Plato's, and before leaving the sphere of mere opinion and feeling, we may recognise a class of characters that specially belongs there (like the types already mentioned under *ἔρως*), and to be found constantly recurring throughout the Platonic dialogues. It is just in such types, fashioned out of the living material of the world, by help of the selection and rejection that every artist must use when he wishes to present with any meaning a part of reality, that Plato develops his views about the activities of the soul. The type, then, that is brought to light in this criticism of the first education is

[1] *Philebus*, 34 B. [2] *Rep.*, vii., 518 E, 521 C.
[3] *Laws*, x., 898 A. See Jowett's translation.
[4] *Rep.*, vii., 515 C. [5] *Ibid.*, vii., 521 E, 522 A.

that of the person trained from his youth to good habits in congenial surroundings,[1] so as to possess what may be called "social virtue" (*δημοτικὴ ἀρετή*). He faithfully reflects the notions and ways of life that surround him, and is by training a lover of beautiful sights and sounds[2]; nay, he is probably also a lover of learning (*φιλομαθής*[3]), and may be so fond of argument that he will delight "like a puppy" to play with opinions and "pull them to pieces".[4] Yet with all this he is still, as it were, in a region of darkness and dreams and shadows,[5] like a prisoner, says Plato, in an underground cave.[6] [7] Such people are content to accept the notions current in the society in which they live, and since their taste has been well trained pleasure may be a very fair guide. Yet even their pleasure in beauty leads them no further; for they spend their lives running about after these things.[8] They are like the artists who delight in mere cleverness. Their art is degraded to mere "Thaumaturgy," Plato says, and becomes insincere and superficial.[9] And the reason is not far to seek. These lovers of sights and sounds are still without the specific power[10] described in the *Phædrus* (*ἐκ πολλῶν ἰὸν αἰσθήσεων εἰς ἓν λογισμῷ ξυναιρούμενον*). They are still content with "the many formulæ of the many men,"[11] and therefore they are still groping in the twilight of opinion. Having no absolute standard they are content to balance pleasure against pleasure, in a manner of "skilful weighing,"[12] an equilibrium so unstable as to be upset by any chance gust of caprice or passion. It is this "many-coloured" life of the emotions, so perilous through its lack of any unifying principle, any absolute and supreme rule or standard by which the worth of pleasure can be once for all assigned, that Plato condemns. He shows that it cannot in fact be a permanent condition; it is merely a stage either on the upward or the downward road. For children must after this manner be trained to virtue,[13] and yet if they grow up and still remain in the dreamland of their youth,[14] unless they find some rude awakening (*διὰ παθημάτων ἀναγκαζομένους*), they will drift farther and farther into the land of shadows, losing hold of themselves and so of reality, until the shadow of death overtakes them.[15] This is the downward course described in

[1] *Cf. Rep.*, x., 619 C. [2] *Ibid.*, v., 476 B.
[3] *Ibid.*, v., 475 D. *τῷ καταμανθάνειν χαίροντες.* [4] *Ibid.*, vii., 539 B.
[5] *Cf. ibid.*, v., 478 C. *Politicus*, 277 D. [6] *Rep.*, vii., 514 A.
[7] *Cf.* the description of *φιλήκοοι καὶ φιλοθεάμονες*, *ibid.*, v., 476 B.
[8] *Ibid.*, 475 D. [9] *Laws*, ii., 669 E, 670 A. [10] *Cf. Rep.*, v., 476 B.
[11] *Ibid.*, v., 479 D. [12] *Protagoras*, 356 B. [13] So in *Laws*, ii., 659 E.
[14] *Cf. Sophist*, 234 C, D. [15] *Rep.*, vii., 534 C.

*Republic*, book viii., which begins with "aristocracy" and ends with "tyranny".[1] It is a degeneration arising in the first instance from the dominance of the "timocratic" element in the soul—that is *θυμός*: *διαφανέστατον δ' ἐν αὐτῇ ἐστὶν ἔν τι μόνον ὑπὸ τοῦ θυμοειδοῦς κρατοῦντος, φιλονικίαι καὶ φιλοτιμίαι* (*Rep.*, 548 C). This is a condition lacking unity to begin with (*μέμικται γάρ*), and though it is still a disposition studious and artistic (*φιλόμουσον καὶ φιλήκοον* – 548 E), through this want of unity it tends always to further disintegration. The balance so nicely adjusted swings down as the character falls under corrupting influences from without,[2] and the man becomes a mere money-grubber, a "drone in the hive".[3] Appetite comes to reign supreme in him, even *θυμός* is dethroned.[4] At first there will be a show of balance about him, for he subdues his "unnecessary" to his "necessary" desires (skilful weighing again[5]), but finally the invading army of "many-coloured" pleasures[6] disarms him and takes possession of the citadel of his soul.[7] In their train comes a host of false and lying notions and 'opinions,' which refuse entrance to any that are better, and all his thoughts and beliefs become perverted. So that insolence he calls "good breeding," anarchy "freedom," shamelessness "courage" (560 E). As he grows older he again perhaps strikes a kind of balance of pleasures in that he welcomes any alike which chance throws in his way, and gives precedence to none.[8] But[9] he has now lost every shadow of consistency or unity, he is never the same person for two days together. His speech and actions, like his pleasures, are the sport of chance. Now comes the last state of all when amid this wild revel of anarchy there arises one mighty and all-enslaving lust, *ἔρωτά τινα προστάτην τῶν ἀργῶν καὶ τὰ ἕτοιμα διανεμομένων ἐπιθυμιῶν, ὑπόπτερον καὶ μέγαν κηφῆνά τινα* (572 E, 573 A). This lords it over the soul,[10] strangling all notions (*δόξαι*) of good that may oppose it, and in place of measure filling it with madness. Truly the last state of the man of opinions is worse than the first, for at last, from the comparatively harmless life of dreams, he has reached a state which is nothing but a terrible nightmare.[11]

In what then, it may be asked, consists the opposite process to this? Whence shall the light come that is to disperse the darkness and awake the soul from dreaming, so that it may

[1] *Rep.*, viii., 544 C.
[2] So *ibid.*, viii., 549 B. *Cf.* (for the notion of the balance) 550 E.
[3] 552 C. [4] 553 C, D. [5] 554 A and D. E. [6] 559 D.
[7] 560 B. [8] 561 C. [9] 561 C, D. [10] 573 B. [11] 574 E.

distinguish substance from shadow and see all things in their true proportion? For this, as Plato is always asserting, is the peculiarity of the twilight land of opinion; that there are no "values" in it [1]—so that the great may appear small and the small great,[2]—there is no sense of harmony or relationship, opinions independent and discrepant flutter about like birds in an aviary, so that the wrong one is seized by mistake. Or again the soul is like a note-book [3] in which the jottings of sense impression and memory (*μνήμη*) are illustrated —"illuminated" as it were—by fancy or imagination. Yet these too are a mere jumble, there is nothing to distinguish the true from the false, the greater from the less. It is as though the eye grew weary with a kaleidoscopic variety of colours in which there was no "key," no scheme, to reduce them to order. Better than all this, Plato seems to say, the slightest sketch in black and white in which the outline is simple and clear.[4] Where then is the key to be found, the magic power that shall select this and reject that and set clear before the soul a scheme of thought and life? Can pleasure be the determining force? But pleasure is seen to possess just this bewildering and boundless variety that characterised opinion.[5] It offers no ground of distinction since it characterises all activity alike. Pleasure and opinion are comrades,[6] not master and servant—*χαίρομεν ὅταν οἰώμεθα εὖ πράττειν, καὶ ὁπόταν χαίρωμεν οἰόμεθα εὖ πράττειν αὖ* (*Laws*, 657 C). It is some force [7] that we must look for, something that shall give form to, find unity in, impose limits upon, this boundless flux, this variegated multiplicity —that, like the sun in the daylight world, shall dispel the dimness and bring to light reality.

[1] *Rep.*, 478 C. *γνώσεως σκοτωδέστερον.*
[2] *Cf. Sophist*, 234 E, and *Rep.*, 605 B.
[3] *Philebus*, 38 E, 39 A. [4] *E.g., cf. ibid.*, 58 D.
[5] *Ibid.*, 40 C, D, 31 A.
[6] *Cf. Laws*, ii., 667 E, 668 A (where pleasure and opinion are coupled).
[7] *Cf. Philebus*, 58 E. *τῆς ψυχῆς ἡμῶν δύναμις.*

*(To be continued.)*

## IV.—A POSTHUMOUS CHAPTER BY J. S. MILL.

By Carveth Read.

The first number of the *Oxford and Cambridge Review* (June, 1907) contains a paper by J. S. Mill found amongst his effects in the house in which he died at Avignon. It is entitled *On Social Freedom: or the Necessary Limits of Individual Freedom Arising out of the Conditions of our Social Life;* and it expresses at least one opinion so much at variance with the teaching that is familiar to us in his classical works as to call for some elucidation.

According to the best judgment I can form, this paper *On Social Freedom* is the introductory chapter of a projected volume on the evil influence of "conventionality or conventional propriety" in overpowering our personal moral sense or reason: showing how much heavier and more degrading is our bondage to this uncentralised authority than to public law and political government. At the close of his *Autobiography* Mill tells us that he has "commenced the preparation of matter for future books"; and here perhaps we have the beginning of one of them. He speaks more than once of "this work": a term which would have been hardly suitable for an essay of less than thirty pages. Probably, again, it is only a first draught, as the composition is in some respects unfinished; and we learn from his *Autobiography* that all his books were "written at least twice over"; that in the first draught he attended chiefly to the arrangement of his subject and left the elaboration of details for the stage of revision. We may, I think, infer further from the occasional diffuseness of illustration, disclaimers of any attempt at precise or recondite inquiry, and even a certain lightness, not to say playfulness of expression, that the work was intended to be popular and rhetorical, or exoteric; whilst more particularly addressed to those who might agree with him in a certain opinion, or *feeling*, namely, "that some motives are higher, and others lower". And thus we may explain why in treating of certain ethical questions he makes

no reference to his own fuller treatment of them in former works.

For instance, speaking, at the outset, of the immediate or spontaneous sense of freedom that we all have, Mill says: "I believe that it is not very difficult to set forth what will appear vastly like a demonstration of this proposition: That human freedom is altogether an illusion or a fiction, that every act of every human creature is absolutely determined by unalterable laws. I will honestly confess that I am wholly unable to furnish anything like a satisfactory refutation of the arguments that may be urged against the existence of human individual freedom." There is no reference to the discussion of freedom either in his work on Hamilton (chap. xxvi.), or in his *Logic* (VI., ii.), though it has always seemed to me that he had there given a very satisfactory refutation of mechanical determinism. He goes on: "At the same time I do not hesitate to affirm that there is no sane being who can adopt and consistently carry out this doctrine. It appears to me that every reasonable act of every sane man is a practical assertion of the existence of individual freedom." Later in the chapter we read: "That man seems to me to act with freedom who yields to the influence of the highest motive which demands his obedience, or which presents itself to his consciousness at the moment of determination". As there is nothing in this contrary to the doctrines of the *Logic*, I can only suppose that he refrained from alluding to that work in the belief that it might be incongruous with the more popular treatment that he was now contemplating. It has indeed occurred to me to wonder whether this paper *On Social Freedom* is really Mill's own; but upon that point Miss Taylor, who has sanctioned its publication, is the best possible judge.

What has interested me most, however, is the doctrine here set forth of motives and their place in ethics. Mill proposes to measure the degree of a man's freedom by the elevation of the motive from which he acts; he even regards the recognition of a scale of motives as necessary to ethics. "It might possibly be a matter of no small difficulty to determine fully and completely which of all the motives that ever influence human actions are higher and which are lower—to arrange all motives of human action in a scale, showing their relative degrees of moral worthiness or unworthiness. This is a problem of which I shall not here attempt the complete solution, since it is not my present purpose to complete the extremely imperfect science of Ethics. But I am strongly convinced that, unless human motives can be

thus arranged in a moral scale, there can never be any such science as ethics at all, or any approach made to the construction of such a science. I think that we may at least take one step towards the formation of such a scale of human motives, in placing the animal appetites at its lowest extremity, as being, of all the motives that can influence human conduct, and which are not actually vicious, the lowest and meanest." How far this passage departs from the position of the *Utilitarianism* will be seen on recalling the well-known passage in chapter ii., where we read that "utilitarian moralists have gone beyond almost all others in affirming that the motive has nothing to do with the morality of the action, though much with the worth of the agent". That motives do not affect the morality of the action but that they do affect the worth of the agent, is enforced in a long footnote, and further explained in the dissertation on Bentham. The morality of an action, of course, he says, depends upon the intention, that is, the foreseen consequences in pleasure and pain. Ethics, therefore, as distinct from the appreciation of character, must, upon this principle, be a science of intentions not of motives, and must be quite independent of the arrangement of motives in a moral scale (which, perhaps, involves a fallacious circle).

It was not, however, this apparent change of opinion that struck me so much as the extension it gives to a resemblance that I have often noticed between Mill's Ethics and Hutcheson's. Mill says, that if there is any principle of morals intuitively obligatory it must be a regard for the pleasures and pains of others; and Hutcheson says that the moral sense judges that with equal degrees of Happiness expected the value of an action is in proportion to the number of persons affected: Mill, that the end is to secure happiness to all mankind, and not to them only, but, so far as the nature of things admits, to the *whole sentient creation;* and Hutcheson, that the aim is the greatest happiness of the greatest number of rationals or *sensitive natures:* Mill qualifies the Benthamist doctrine of pleasure by maintaining that pleasures differ in kind, and that our choice is determined by a sense of *dignity;* and Hutcheson holds that pleasures differ in duration and intenseness or *dignity*—without ever explaining what he means by "dignity": Mill proposes that the test of quality shall be the preference felt by those who by their opportunities of experience, to which must be added their habits of self-consciousness and self-observation, are best furnished with the means of comparison; Hutcheson says those alone are capable of judging who have experienced

all the several kinds of pleasure and have their senses acute and fully exercised in them all. So far the parallel ran before the publication of the essay on *Social Freedom;* and this supplies a further resemblance; for whilst Mill demands the recognition of a scale of motives, Hutcheson actually proposes one, placing at the bottom of those that have any moral worth "turbulent" motives towards the good of others, and then, in ascending ranks, "calm" good will toward particular persons, toward systems (family or country), and toward all rational or sensitive natures. This idea has been most fully developed by Martineau in *Types of Ethical Theory*, and criticised by Sidgwick in *Methods of Ethics* (bk. iii., chap. xii.). Martineau's work was published in 1885, after Mill's death. Hutcheson, indeed, does not regard the scale of motives as affecting the good or evil of actions; that must depend upon the event: except that "actions are not to be judged good or evil by the events any farther than they might have been foreseen or were intended"—another point of resemblance to *Utilitarianism.*

Now so many coincidences can hardly be accidental. The proposal to test the quality of pleasure by invoking the wise man, or a committee of wise men, might, of course, be traced to Plato; and it is possible that in every case Mill was drawing from his own spring and not from another's cistern. I do not remember that he ever mentions Hutcheson, and he was incapable of deliberate plagiarism. It seems to me, therefore, that he must have devoured Hutcheson in his omnivorous youth and forgotten it, though some ideas then assimilated entered into the tissue of his later thoughts.

Hutcheson has an obvious ground for his scale of motives: the end being the greatest Happiness, every disposition is more virtuous as it aims more directly at that mark; but Mill declines to give any discriminating reason: "The fact to which I would appeal is that we—meaning those persons to whom this work is mainly addressed—have a strong and unmistakable *feeling* that some motives are higher, and others lower. This feeling we who experience it are no more bound to explain or account for, in order to justify our acting upon it, than we are bound to account for the distinctions of colour in order to justify our selecting our draperies according to their tints or patterns." Is not this appeal to a special class, not only for sympathy but as the tribunal of conduct, strangely unlike the persuasive public utterance that we are accustomed to from Mill? It is possible that *Social Freedom* signifies by one or two of its features an extensive change of the author's opinions. Changes greater or less

had always been going on in his mind since the early days when he read Wordsworth and conversed with Maurice. Bain tells us that "Grote always had a certain misgiving as to his persistence in the true faith. He would say to me, 'Much as I admire John Mill, my admiration is always mixed with fear'; meaning that he never knew what unexpected turn Mill might take. This I regarded as an exaggeration due, in the first instance, to Grote's gloomy temperament." On the other hand, we do not know at what date *Social Freedom* was written; perhaps at some period when he felt severely the pressure of convention and the value of high motives. At any rate, it was never, I am convinced, finished by the author for publication; and the propriety of publishing fragments, lecture-notes and other unrevised remains, without the author's sanction, is extremely questionable. This voice from the grave excites in all of us a pathetic interest; and on the whole, in my own mind, its pathetic character is the most abiding.

## V.—DISCUSSIONS.

### SOME NOTES ON MR. HOERNLÉ'S CRITICISM OF IDEALISM.

THERE are two points mentioned in Mr. Hoernlé's review of idealism in MIND, October, 1907, which seem of sufficiently general interest to justify a few remarks by way of elucidating the problems in question.

The first is discussed on pages 556-559—the reality of the self-consciousness of a society as such, as distinct from the individual self-consciousness of its units. My reviewer has found this a hard saying: and indeed that is not surprising since Mr. Hoernlé, so far as one can judge from his review, has given no more than a cursory attention to the argument.

Looking at the subject from a somewhat different angle from that adopted in the course of the argument, the position may be put in this way. (*a*) Society as such seems to me an individuality as much as any unit composing it. Individuality is not simply a question of size but of arrangement of elements. Any unity with component parts knit together within the unity has individuality. Thus a planetary system has individuality as much as a planet or a tree that grows on a planet. The greater the variety of elements unified, and again the greater the degree of coherent unification, the greater the individuality. A society as such presents historically all the characteristics of individuality. It has, *e.g.*, a prescribed area of physical embodiment, of varied activity, and of unity of plan or order. Of course the extent to which its individuality is realised varies from society to society in the history of mankind. But in every case where a social whole exists as an orderly unity of human activities, there we have a certain degree of individuality attained. Its component elements are distinguished *inter se* as, *e.g.*, human units: but the human units are not a social individuality, not a society, until there is a unity of plan or order pervading the units distinct from any and all the units separately, and controlling the direction of the activities of the units within the prescribed limits of that order, whatever that order be. Race, language, physical composition, etc., may all go to contribute to this whole, and determine its characteristics. If it be said that a human unit is an individuality in an entirely different sense, I ask in what sense is it different? The individuality of a human unit varies in degree and in kind just

as much as a society. If societies are often amorphous, so are human units; if societies increase or diminish, expand or contract in size or degree of coherence, so do human units: revolutions and dissociation of essential constituents occur in both: physical embodiment there is in both: plurality of elements with unity of plan is inseparable from the meaning of each. The only difference is one of size, and that is irrelevant; and in the mode of realising individuality, and that is to be expected. The same is true when we compare with a society specific associations of human units within it. The latter have or may have individuality of their own; not so coherent in many cases as in others, and sometimes, as *e.g.* in an assembly, of very temporary duration. The specific circumstances of time, place and purpose qualify the individuality, but do not affect its realisation as a fact.

(*b*) The individuality of a society is self-conscious, as much as and in the same general sense as a human unit. Characteristic features of self-consciousness are the awareness of ends pursued for the sake of, and realised in the fulfilling of, individuality: the awareness of continuity between past and future: mutual recognition of individuality by another individuality, and as a consequence the mutual sharing and inter-communication of purposes in "thought" and in "action". All these features are found in a society as such. The first is seen in the deliberate pursuit of new aims for the achievement of greater unity and order: in the fact of progressive adjustment to altered historical circumstances, *e.g.*, the adaptation of methods of government to changed views of human worth or of the relations of classes in a social whole. The second is seen in the conscious maintenance of social traditions and customary forms of procedure, traditions and customs which operate as obligations not merely on the human units but on the social whole as such.[1] The traditions and customs are the substance of a social memory, and sustain, like memory in the human unit, the awareness of social continuity. The third is seen in the inter-social or, as it may be, the international, relations of societies on the one hand, and in the relations of a society to its units on the other. The latter appears *e.g.* in the phenomena of patriotism, or of acquiescence in legitimate punishment; and again in the recognised identity between the "will" of the units and the "general will".

A very simple and obvious objection to this interpretation of a social mind, of a social self-consciousness, is put in the form of the question "Where is the brain of this self-consciousness of a social individuality? In every case where we speak of the mind of a

[1] This last point seems neglected in the ordinary interpretation of custom. Custom is not simply a norm of action for units, but for the whole society as such. This we see *e.g.* in the fact that representative rulers and leaders of a society have to submit to the historically transmitted forms of action (V. Westermarck, *Origin and Development of Moral Ideas*, p. 162).

unit we find a brain whose activity, whether running 'parallel' to its mind or otherwise, is at any rate always associated with it, and 'conditions' its actuality. Is there a brain in the case of social mind?" The reply to this question seems best given by first asking another question. The brain of a human unit in a society is a composite whole of nerve centres and nerve connexions. Where is the cell in this brain which is associated with the selfhood of the unit? Is any one prepared to say there is such a cell at all? Surely the selfhood of the unit is bound up with the totality of cells composing the physical mass of the brain. Whether it is the product of the combined action of these innumerable cells, or is merely 'associated' with that combined action, we may leave to psychologists and physiologists to determine. We are at any rate safe in saying selfhood is not to be assigned to a single cell. Similarly in the case of social self-consciousness. The brain of this self-consciousness is not associated with the brain of a unit, but with all the brains of all the units. The brain of a particular unit is to the brain of the whole as the cell of the brain of a specific unit is to the whole of its brain. If any one replies 'but the brains of the units are spatially distinct wholes, how can they be parts of the single brain of social mind?' the answer comes at once that the cells of the brain of a unit are also spatially distinct wholes and yet this does *not* prevent them from being parts of a single brain. Moreover the possibility of the brains of the units being looked at as forming a single physical substratum for social mind, is suggested by the present tendency of physical speculation regarding the constitution of matter. The present tendency is to regard the separate parts of matter as qualitative modifications of a continuous homogeneous medium, as 'knots in the ether,' the discreteness of which is determined by direction of motion on the one hand and position in space on the other, and the identity of which is ensured by the qualitative uniformity of the pervading medium. Whether accurately formulated or not at present, this speculation seems at any rate in the right direction on which an explanation must proceed, for the aim of such an explanation is precisely to show that matter is identical in constitution and yet different in manifestation. In the face of this present tendency of physical speculation, is any one prepared to deny that there is physical continuity between certain forms of physical matter, *viz.*, the brain stuff of human individuals? I do not bring forward as demonstrated an hypothesis which is of course not yet proved at all. I merely wish to urge that such considerations do assist us to conceive how the undoubted fact of the single and uniform activity of a social whole is interpretable on its physical side.[1]

[1] I am assuming for the purposes of argument that the separation between the physical and mental sides can be legitimately made. In principle, however, the separation seems to me unsound wherever it is made.

The argument against the conception of a social mind proceeds largely on the assumption that human units are separate materially in space, are perceptibly distinct, and therefore are self-closed reals. To attempt to think human self-conscious units merely in terms of perception is at the very best superficial and inadequate. But even on its own assumption it could not justify the conclusion that they are self-closed reals, for the spatially distinct material units apprehended by perception are but parts of a continuous material system. And the continuity of the mind stuff of society, whatever be our theory of its nature, seems abundantly established not only by such facts as those already referred to, but also by such phenomena as those of social automatism and suggestion by which the work of a society is so largely carried on.[1]

(*c*) The working relation of the mind of the unit to the social mind is best considered as the relation of a partial, and always partial, range of purposes to the total system of ends which constitute the spiritual life of a society. This at once does justice to the distinct individuation of a unit, and that complicated interlocking of purposes which, in moral experience, makes harmonious social activity possible. Looked at in this way, we can accept the substantial accuracy of the expression that the consciousness of a society is the consciousness of its units thinking of themselves as members one with another in a single whole. We cannot interpret the relation of individuals to individuals in a social whole merely from the level of perception, after the analogy of grains of sand in a heap, each physically apart in space and only related by external contact at the surface. This view has once for all to be abandoned, and no one has done more in recent philosophy to abolish the theory than Prof. Bosanquet. If we are to use a working image at all to express the relation, it

[1] Mr. Hoernlé's view of the "reality of the general will," on p. 559, is particularly interesting as a typical expression of the faint-hearted acknowledgment of facts which have somehow to be faced. He does not deny the 'reality of the *volonté générale*'. But for the individual citizen, it is 'an idea of which he is conscious as being pursued by himself in common with the majority of his fellow-citizens'. By the reality of the general will is therefore to be meant an idea only; the idea is not an idea *of* that reality, it *is* that reality. This seems odd when we bear in mind that reality for Mr. Hoernlé means either what exists or the essence of what exists (p. 570). But apart from that, if there is reality one would have thought that it must be independent of the ideas of this or that citizen; yet to make it an idea just means that it is *not* operative *per se*, whether any one wishes or not. And again to resolve it into an idea possessed in common by several is strictly to dissolve it into a plurality of ideas which happen to agree. To give this chance happening the name of reality in any sense is an abuse of terms. But Mr. Hoernlé does not mean this. For the 'general will' has a reality like that of the 'common world of perception'. Let us accept the analogy for what it is worth. The general will has at least as much reality as this common world. Now the latter has certainly a being on its own account independent of the percipience of an individual or even a plurality of individuals.

should rather be drawn from art than mechanics, and rather from psychology than biology.[1] The attempt on the part of a critic to deny the incessant domination of the mind of the unit by the independent agency of the social mind as such can only be done through ignoring the facts offered by sociology, and through defective moral experience on the part of the critic himself.

The second point in Mr. Hoernlé's paper to which I shall briefly refer is the connexion between the subject-object relation characteristic of experience and the diversity of content in experience, to reduce which to complete unity is the ideal of knowledge. The point is important, and the difficulty he expresses may appeal to many critics. The correction which he suggests, that consciousness must be looked on as a bare form, and that the whole range of diversity comes from the objective 'content,' is inadmissible and a misunderstanding of the position. The subject that is conscious is never a mere form nor a passive recipient of content any more than the object is a mere form: and the variety of content is not to be ascribed to the object aspect of experience alone. The position of the argument is: (1) that subject and object are distinct but not separable in any sense or at any level of experience: (2) that the distinction between them is the source from which all distinction in the course of conscious experience ultimately comes: (3) that the diversity and variety of experience is in every case a double-sided affair, due to the subject side as much as to the object side: (4) and hence that in the long run to unite the greatest diversity in the completest unity is the same thing as to unite completely in a single mode of experience subject and object. We must get rid of the idea that consciousness is an empty form which somehow is to embrace the whole variety of objective content. Such an idea is analogous to, and less justifiable than, the mathematician's idea of space as a kind of empty room into which somehow the substance of the material world is packed and arranged. Rather we must conceive of the distinction and relation of subject and object in experience as in every case resembling *e.g.* the growth of a child's apprehension of its world, or again the development of the meaning of a problem in the mind of a scientific investigator. In the case of the child, for example, its apprehension is as much determined by its capacities, its natural endowments, its memories, its sensibility, etc., as by the character of the common world it shares with other minds. Its subjective reactions with their peculiar constitution enter as much into the constitution of its apprehending experience as the character of the common object which it gradually makes it own. And the growth of its apprehension involves a modification on both sides, the object changes and the subject changes with the attainment of every new equilibrium, or conscious unity of the factors concerned in the process. At no stage

[1] The conception of "organism" as applied to society breaks down under analysis as Dr. Mactaggart has shown (*v. Studies in Hegelian Cosmology*, ch. vii.).

can the two be sundered; they permeate each other from the first and all along the line. An analogy like this seems alone to be adequate to that inter-penetration of subject and object throughout the whole range of experience which it was the aim of my argument to exhibit. The diversity that arises is never diversity in the abstract, it is always diversity of a specific kind; relative to and constituting a specific mode of experience. There is no need therefore to think of the problem as one dealing with the relation of a diversity, falling solely within the objective sphere, to an empty form of consciousness. That is a common error; it is the error of mechanical dualism in all its forms, and an error which Kant's theory of knowledge has refuted once for all. The whole process of experience tells an entirely different tale and sets an entirely different problem in consequence. If we see from the first that the duality in unity in which experience consists spells diversity in unity, we have at once the source of all the diversity there is to explain.

There seems no reason for dealing further with Mr. Hoernlé's criticism of the idealistic argument. His criticism unfortunately shows that he has failed to grasp the principle of the argument or the limits within which it works; and consists for the most part in the reiteration of objections that have been all too freely used in the past by the orthodox opponents of Hegel or of idealism. His misapprehension of the argument is at times so singular as to be quite unaccountable. Thus, to quote an instance, he says, page 550, that the 'recognition of purposiveness' in the introductory chapter of the book, is 'in reality very perfunctory and barren' and 'in the rest of the book no further use is made of the conception' and 'the mention of it in chapter i. reads like an isolated after-thought'. Yet when on the next page he proceeds to state the general character of the argument he says, rightly enough, that all knowledge (*i.e.* experience as it is discussed in the book) is looked on as an 'activity' with 'an end' and that 'it is a process with an ideal,' the ideal is the 'actual moving-power in the process'. In other words, on one page he says purposiveness is an after-thought in the work, on the next the idea of end is admitted to be the controlling idea in the construction of the process of experience as there presented! What, one asks, is construction by reference to an end but the systematic application of purposiveness? A critic who writes thus seems to have either a short memory, or an imperfect sense of contradiction.

Mr. Hoernlé's repetition of the familiar objections to thoroughgoing idealism calls for no reply. I am convinced that even the most plausible of these objections have little or no value until the theory of reality which they imply has been systematically worked out.[1] Perhaps Mr. Hoernlé will allow me to add that there has

[1] Lotze is one of the few who have expounded the theory on the basis of which the attack is made. Others, *e.g.* Trendelenburg and Haym, never attempted as much.

been no neglect of 'the philosophical work that has been done since 1806,' and that I feel sure the well-informed reader who has reflected about the problems of recent or current philosophy will not find the book 'out of touch with modern thought,' and will not consider the suppression of much direct polemics a defect of expository argument.

J. B. Baillie.

## A REPLY TO PROFESSOR BAILLIE.

Owing to my approaching departure from this country the Editor has kindly permitted me to make an immediate reply to Prof. Baillie's 'Notes' on my criticism of his book.

These 'Notes' make it quite clear that in philosophical matters Prof. Baillie and I do not see eye to eye. But I am distressed to find that our disagreement is largely due to the fact that we seem to attach different meanings to the same terms. At least—since I have no wish to return Prof. Baillie's charge about 'cursory attention to the argument'—that is the only assumption on which I can explain to myself the misunderstandings of my criticism of which Prof. Baillie has himself been guilty. In justice to myself I feel bound to point these out.

(1) In the second half of his reply, Prof. Baillie attributes to me the view 'that consciousness must be looked on as a bare form'. Now so far from my having suggested this view as a 'correction' of Prof. Baillie's own view, it is *exactly the objection which I tried to raise against his view*. This, I still maintain, is the clear meaning of the passage in Mind, N.S. xvi., 64, pp. 564-65. The statement which I there criticised, *viz.*, that 'the diversity lies in the two elements distinguished, *viz.*, consciousness and a somewhat or objects,' seemed to me to imply this false view of consciousness as a bare form, and therefore to be in contradiction to Prof. Baillie's own original definition of consciousness as essentially an 'awareness of somewhat'. I am glad to be told that Prof. Baillie does not commit the error in question, but I fail to see on what grounds he charges *me* with it. Apparently Prof. Baillie uses 'consciousness' as synonymous with 'subject'. But the subject, I take it, can distinguish itself from the object only in so far as it becomes an object to itself, so that the distinction between them would fall into the total objective content of consciousness.

(2) Prof. Baillie's footnote on my treatment of the 'general will' rests wholly on a misapprehension of the meaning of 'idea' in my statement that the general will is for the individual citizen 'an idea of which he is conscious as being pursued by himself in common with the majority of his fellow-citizens'. Perhaps I failed to make clear that I had in mind Mr. Bradley's definition of will as the 'realisation of an idea'. I was trying to describe the joint effort and co-operation of individuals for the realisation of the same idea,

*e.g.*, a certain piece of social reform. If the passage is interpreted in this light, it will be seen that Prof. Baillie's criticisms fall to the ground.

(3) As for the 'self-consciousness of society as such,' I do not deny either that society is an 'individuality' in the sense of being a 'system,' or that it is, as Prof. Baillie called it in his book, an 'order of self-conscious individual wills,' but—without pleading guilty to the charge of 'defective moral experience'—I still remain unconvinced that from this basis we can argue that society as such is a self-consciousness. The maintenance, *e.g.*, of customs and traditions seems to me to depend solely on the obedience and recognition which they receive from the individual members of the society, though in most cases this obedience will rest on education and habit rather than on deliberate adoption and choice. However, on this point both Prof. Baillie and I have had our say, and now I would gladly see the discussion taken up by others.

In fact, it was in this hope of raising a fresh discussion of the fundamental doctrines of idealism that I wrote so elaborate a criticism of Prof. Baillie's book. I welcome Prof. Baillie's 'Notes' as the first beginnings of such a discussion, even though they have left me wishing that he had dealt with many other points besides.

R. F. Alfred Hoernlé.

## VI.—CRITICAL NOTICES.

*Henry Sidgwick.* A Memoir by A. S. and E. M. S. London: Macmillan & Co., 1906. Pp. 646.

*Memoir of Thomas Hill Green,* Late Fellow of Balliol College, Oxford, and Whyte's Professor of Moral Philosophy in the University of Oxford. By R. L. Nettleship, with a short Preface specially written for this edition by Mrs. T. H. Green. Pp. vii, 259. London: Longmans, Green & Co., 1906.

The Memoir of Henry Sidgwick published by his wife and brother is in the main a personal record, and the pages of Mind are not the place in which to dwell on the biographical facts of a quiet and uneventful life, or even on the beautiful and simple character which the Memoir partially reveals to those who were not brought within the charm of his sunny personality. But a philosophical periodical may fitly inquire what light these more private records throw upon the growth of Sidgwick's ideas and the influences which went to shape his thought. What were the intimate convictions and preoccupying questions which lay behind his published work and which only occasionally make themselves felt in the course of its impartial discussion and carefully measured pronouncements?

In a short (too short) autobiographical fragment, dictated about a fortnight before his death, Sidgwick speaks of the central and fundamental aim of his life as having been "the solution, or contribution to the solution, of the deepest problems of human life"; and he adds, "the peculiarity of my career has been that I have sought light on these problems, and that not casually but systematically and laboriously, from very various sources and by very diverse methods". Few, indeed, have ever fulfilled so well Berkeley's injunction to the philosopher not to be content with "a little ardour in the early time of life," but to "dedicate his age as well as youth, the later growth as well as first fruits, at the altar of Truth". Intense intellectual curiosity is mentioned as the chief mark of the boy, and an old friend, writing of him as an undergraduate, puts down as "his first and supreme characteristic, candour. It seemed to me then, as it does now, something morally beautiful and surprising; it dominated and coloured his other great qualities—those of subtlety, memory, boldness." Every one who knew Sidgwick, every one who has read his books, will recognise at once the truth of these words.

Perfect intellectual candour is not without its drawbacks or at least its besetting dangers, and some may be inclined to sympathise with Leslie Stephen's complaint (in his warm tribute at the Memorial meeting in Cambridge) that "if possible Sidgwick carried his love of fair play rather to excess; in his speculations he saw too completely the force of the opposite side". Sidgwick himself, in one of his keen passages of self-analysis, touches the defect as well as the charm of his own quality. "I think," he says in a letter of 1866, "I have more knowledge of what the thoughts of men have been, and a less conscious faculty of choosing the true and refusing the false among them. I wonder whether I shall remain a boy all my life in this respect. I do not say this paradoxically, but having John Grote in my mind, who certainly retained, with the freshness, the indecisiveness of youth till the day of his death." But there was something very beautiful in Sidgwick's open-mindedness, in the freshness of which he speaks, in his unending search for light. At the meeting already referred to Dr. Gore in a speech of deep feeling commented on this characteristic—the perpetual hopefulness of his inquiry. "He always seemed to expect that some new turn of argument, some new phase of thought, might arise and put a new aspect upon the intellectual scenery, or give a new weight in the balance of argument.[1] There was in him an extraordinary belief in *following reason*—a belief and a hopefulness which continued up to the last. This is, I venture to think, a quality which is exceedingly rare in our time, for mostly when we have settled down to our positions, we lose any real hope of obtaining any strikingly new light on the deepest matters. It was quite otherwise with Sidgwick. Although, no doubt, you felt that the dominant quality of his mind was sceptical . . . yet it was profoundly different from ordinary scepticism; for it was inspired by a fundamental belief in the attainableness of positive truth. At the bottom of his mind was the profound desire to find an adequate basis on which to rest a positive construction of a worthy life."

When Sidgwick's mind first opened to philosophical questions, Mill's influence was at its height. "No one thinker, so far as I know," he says in the autobiographical fragment already quoted, "has ever had anything like equal influence in the forty years or so that have elapsed since Mill's domination began to weaken." So we find him about 1859 or 1860 beginning a systematic study of Mill's works, acquiring at the same time a mastery of political economy, and devoting a good deal of thought to practical questions, social and political. In another passage of reminiscence he describes "the ideal which became dominant in his mind in the early sixties," primarily under Mill's influence, but partly under the influence of

[1] Sidgwick himself refers, in a letter of 1873, to "a peculiar hallucination under which I labour that I shall suddenly find my ideas cleared up —say the day after to-morrow—on the subjects over which I brood heavily" (p. 277).

"Comte seen through Mill's spectacles": "It had two aspects, one social and the other philosophical or theological. What we aimed at from a social point of view was a complete revision of human relations, political, moral, and economic, in the light of science directed by comprehension and impartial sympathy; and an unsparing reform of whatever, in the judgment of science, was pronounced to be not conducive to the general happiness. This social science must, of course, have historical knowledge as a basis; but, being science, it must regard the unscientific beliefs, moral or political, of past ages as altogether wrong—at least in respect of the method of their attainment, and the grounds on which they were accepted. . . . As regards theology, those with whom I sympathised had no close agreement in conclusions—their views varied from pure positivism to the 'Neo-christianity' of the Essayists and Reviewers; and my own opinions were for many years unsettled and widely fluctuating. What was fixed and unalterable and accepted by us all was the necessity and duty of examining the evidence for historical Christianity with strict scientific impartiality." By way of facing this duty Sidgwick devoted the greater part of his spare time for about three years to the study of Arabic and Hebrew literature and history, under the conviction that "it was impossible really to understand at first hand Christianity as a historical religion without penetrating more deeply the mind of the Hebrews and of the Semitic stock from which they sprang". The fact is characteristic of Sidgwick's conscientious desire, on every question, to do justice to all the evidence. Not less characteristic is his "secret conviction that the great use of learning Hebrew is to ascertain how little depends on it" (p. 89). Before the beginning of 1865 he had finally abandoned his oriental studies, and was turning to philosophy as a more direct source of light on his religious difficulties. As early as 1862 we find him "revolving a Theory of Ethics". "I think I see a reconciliation between the moral sense and utilitarian theories" (p. 75). In 1864 he has been setting to work on a book that was to be called 'Eudæmonism Restated'. This is, of course, the *Methods of Ethics*, eventually published in December, 1874. The different influences which led to the writing of the book and to the precise formulation of the author's theory have been detailed by Sidgwick himself in the lecture-sketch prefixed to the posthumous edition, and the Memoir adds no further information. It shows Sidgwick, however, wrestling with German philosophy in 1866 and again in 1870. In 1866 Fichte seems to him "absolutely devoid of judgment" and he is "coming more and more to the opinion that the whole 'Identitätsphilosophie' (Fichte, Schelling and Hegel) is a monstrous mistake, and that we must go back to Kant and begin again from him". "Not," he adds, "that I feel prepared to call myself a Kantian, but I shall always look on him as one of my teachers." He has parted company with Mill, he feels, for ever, and he thinks that "the best motto for a true Metaphysic are those two lines of Shelley:—

**I am the eye with which the Universe**
**Beholds itself, and knows itself divine".**

This might be claimed as an eminently Hegelian utterance, but it is not till 1870 that we find him trying to settle accounts with Hegel, forced thereto, as he candidly says, rather by "a sense of professional duty than any natural instinct". "Day after day," he writes from Berlin in the midst of the Franco-German war, "I sit down to my books with a firm determination to master the German Heraclitus, and as regularly I depart to my Mittagsessen with a sense of hopeless defeat. No difficulty of any other writer can convey the least conception even of the sort of difficulty that I find in Hegel. My only consolation is that every other sort of philosophical work I take up seems easy. But no amount of difficulty alone would distress my spirit, if there was not added the paralysing doubt whether, after all, I am not breaking my head over highly profound nonsense." After some weeks of the struggle he records his determination to read no more of it. "The *method* seems to me a mistake, and therefore the system a ruin; there may be 'gold to be dug there,' as Carlyle says, but I have no time to dig for it among the scoriæ." And yet the admissions he makes would go far to satisfy most of those who have learned in Hegel's school. "There are some great broad truths, independent of the method, and lying safe at the base of the system; with Hegel's intense grasp of these I sympathise strongly, and to it I attribute the success of his philosophy, *e.g.*, generally speaking, the reaction from the formalism, phenomenalism, ultra-subjectivism of Kant. That the Universe is essentially and fundamentally rational; the laws of the subject and the object harmonious; history the evolution of the human spirit, etc., etc.—all this is well enough. And I do not say that the science of metaphysics will not ultimately be constructed in the way that Hegel tried to construct it, by patiently thinking out the meaning of our most general and fundamental notions and their relation to each other." But though he does this justice to the spirit and intention of the Hegelian philosophy, he had no natural affinity with its speculative sweep. He describes the system of his own to which he was feeling his way in 1866 as "founded on a union between Brown and Hamilton, with an intermixture of Kant and Ferrier". "My fundamental position," he writes to Roden Noel, "is much what it was in summer—that fundamental dualism which seems to you so unphilosophical." This dualism reappears in his strictures on "Mentalism," in his lectures on "Philosophy, its Scope and Relations"; and his sympathetic lecture on Reid towards the close of his life shows that philosophy meant to him very much what it meant to the Scottish philosophers. His lectures on Kant, incisive as they are at points in dealing with individual arguments and positions advanced by Kant, make the impression of criticisms from the outside by one who had never appreciated the central thoughts of Kant on which Idealism builds.

To Sidgwick as to Lotze, with whom he had temperamentally a good deal in common, the problem of philosophy presented itself as the "reconcilement of spiritual needs with intellectual principles" (p. 75). For some years after the difficulties of historical Christianity began to press upon him his mood was in his own phrase that of one 'hungering and thirsting after orthodoxy'. "I have vowed," he writes in 1862, "that it shall not be for want of profound and devoted study if I do not become a Christian." "But I am firm," he adds, "not to barter my intellectual birthright for a mess of mystical pottage" (pp. 82 and 90). After a series of oscillations between Broad Churchism and a vague Theism he was able to say at the end of 1864 that he had definitely "freed his innermost conscience from the thraldom of a historical belief," and he never swerved from this position, although his personal relation to the traditional faith occupied his thoughts a good deal till the resignation of his Fellowship in 1869. "For many years," he says in 1880, "I have not thought of Christianity except as the creed of my friends and fellow-countrymen." But he considered it to the end as an all but indispensable support of theistic or optimistic faith for the mass of mankind (pp. 357, 508), specially in view of 'the Christian hope of happy immortality'. Hence his prevailing mood is the one he describes on the return from a visit to his brother-in-law, Archbishop Benson, at Addington in 1866: "I find that I grow more and more, on the one hand, to regard Christianity as indispensable and irreplaceable—looking at it from a sociological point of view—and on the other hand to find it more and more incomprehensible how any one whom I feel to be really akin to myself in intellectual habits and culture can possibly find his religion in it". It is interesting to note, however, that while he considers Christianity indispensable in the present state of the world, he is "not prepared to say that this will be equally true some centuries hence; in fact I see strong ground for believing that it will *not* be equally true, since the tendency of development has certainly been to make human beings more sympathetic; and the more sympathetic they become, the more likely it seems to me that the results of their actions on other human beings (including remote posterity) will supply adequate motives to goodness of conduct, and render the expectation of personal immortality less important from this point of view" (p. 357, in letter to J. R. Mozley, 1881). And in a paper on Authority, read to the Synthetic Society in 1899, one of the last things he wrote, he returns to the possibility of "untheological morality," that is, morality unsupported by theological beliefs or sanctions. Many would be inclined to consider the cases which occur of high morality unsupported by such conditions as purely exceptional, but this Sidgwick is not prepared to admit. "The difficulty that I find is in convincing myself that this untheological morality is really abnormal, and does not rather represent the beginnings of a more advanced stage in the development of the moral consciousness. It

seems to me a tenable view that the development of scientific sociology and of social sentiment in average men tends ultimately to disconnect morality from its present theological scaffolding, and exhibit it as simply the outcome of social feeling, guided by a rational forecast of social consequences" (p. 615).

But while Sidgwick had personally discarded Christianity as a historical system, he clung tenaciously to some form of theistic belief. In 1862 he defines Theism as the contemplation of "a Heart and Mind behind phenomena". He finds "no sort of proof against" this hypothesis and it "answers to a need" of his own nature, while "the experience of thousands testifies that such contemplation generates an abiding *ἐνθουσιασμός*, with all its attendant noblenesses and raptures". In 1870, although he "can neither adequately rationalise faith, nor reconcile faith and reason, nor suppress reason," he knows that his "true self is a Theist". In 1891 he refers to Theism as "the belief that there is a sympathetic soul of the Universe that intends the welfare of each particular human being and is guiding all the events of his life for his good," and a few years later, in a letter on *In Memoriam*, after quoting the concluding stanzas of Section 124, he writes: "These lines I can never read without tears. I feel in them the indestructible and inalienable minimum of faith which humanity cannot give up, because it is necessary for life; and which I know that I, at least so far as the man in me is deeper than the methodical thinker, cannot give up" (p. 541). He talks frequently of his "Optimism" and refers once to his "idealism" which "the cold corrosive scepticism," to which he is subject as a thinker, is somehow powerless to affect (p. 283). There can be no doubt, therefore, as to the cast of his personal *Weltanschauung*. But when the methodical thinker speaks, and the question of proof is uppermost, the answer is more balanced. "If I am asked whether I believe in a God," he writes in 1880, "I should really have to say that I do not know—that is, I do not know whether I *believe* or merely *hope* that there is a moral order in this universe that we know, a supreme principle of Wisdom and Benevolence, guiding all things to good ends, and to the happiness of the good. I certainly *hope* that this is so, but I do not think it capable of being *proved*. All I can say is that no opposed explanation of the origin of the cosmos—for instance the atomistic explanation—seems to me even plausible, and that I cannot accept life on any other terms, or construct a rational system of my own conduct except on the basis of this faith. . . . Duty is to me as real a thing as the physical world, though it is not apprehended in the same way; but all my apparent knowledge of duty falls into chaos if my belief in the moral government of the world is conceived to be withdrawn. Well, I cannot reconcile myself to disbelief in duty; in fact, if I did, I should feel that the last barrier between me and complete philosophical scepticism, or disbelief in truth altogether, was broken down. Therefore I sometimes say to myself 'I believe

in God'; while sometimes again, I can say no more than 'I *hope* this belief is true, and I must and will act as if it was'" (pp. 347-48).

All students of Sidgwick are familiar with this position which is essentially the solution of the 'dualism of the practical reason' put forward tentatively in the concluding paragraphs of the *Methods of Ethics*. Without some datum beyond experience, he had written in 1874, in the first edition, "the cosmos of Duty is reduced to a Chaos". The wording of these paragraphs was subjected to a good deal of modification in successive editions, but to the end we find him dwelling on "the vital need that our Practical Reason feels of proving or postulating this connexion of Virtue and self-interest, if it is to be made consistent with itself" (sixth edition, p. 506), and the position obviously bears a close resemblance to Kant's doctrine of God as a postulate of the practical reason. Many would maintain, as Dr. Rashdall, for example, has recently urged, that the supposed dualism is entirely owing to Sidgwick's purely hedonistic conception of the Good. If the pursuit of universal good is once recognised as my reasonable duty, then the reasonableness of that duty cannot depend on its turning out that my obedience has brought me personally more pleasure than pain. "How can it be reasonable," says Dr. Rashdall, "to take the point of view of the part when once the man knows the existence of the whole, and admits that the whole is more important than the part? Must not the point of view of the whole be the one and only reasonable point of view?" (*Theory of Good and Evil*, i., 56). While transcending egoistic hedonism through his acceptance of the axiom of universal Benevolence, Sidgwick, in emphasising this dualism, harks back to the very position he had abandoned. Having accepted the good of the whole as the only ultimately reasonable ethical end, he seems to turn round and refuse to admit its reasonableness unless it can further justify itself as the most pleasurable course for the individual. But this is to fail to maintain himself at the ethical point of view. As a matter of fact, the moral consciousness neither asks nor gets its wages in the hedonistic currency: and the passages already quoted on "untheological morality" and the growth of the sympathetic feelings are evidence that as time went on Sidgwick himself was inclined to lay less stress on this dualism and less stress therefore on the theistic postulate, at least as conceived in Kant's sense and for Kant's purposes. The theological or metaphysical postulate becomes rather the belief in a moral order of the universe than belief in a Person regulating that order. The two forms of expression are frequently used by him alternately,[1] and in a letter to J. A. Symonds, written in 1886 at a time when he says his mind has been "obstinately and latently occupied with the fundamental question of the relation of morality," he says, "I tend to the view that the question of Per-

[1] *E.g.* in the passage quoted above (p. 347), or again (p. 560) where he speaks, in 1898, of "the need of Theism—or at least some doctrine establishing the moral order of the world".

sonality, the point on which the theist as such differs from the atheist, is of no fundamental ethical importance. The question is *what* is the order of the Cosmos, not whether it is a consciously planned order" (p. 455).

There is another important point on which I think we may note a change in Sidgwick's attitude in the later years of his life—I mean the question of the nature of proof. He started with the old ideal of "conclusions logically inferred from self-evident principles," but, unconsciously influenced perhaps by the central Kantian idea of 'transcendental deduction'—proof from the possibility of experience—and by the debates which arose round Mr. Balfour's *Foundations of Belief*, he refers in the concluding paragraph of the last edition of the *Methods* to the analogy of physical science and suggests (without absolutely committing himself to) the new criterion of the truth of any propositions, "that they are indispensable to the systematic coherence of our beliefs". The same parallel is more elaborately drawn in a paper 'On the Nature of the Evidence for Theism' read to the Synthetic Society in 1898 and printed as an appendix to the Memoir. In this paper he definitely refuses to admit "that verification by particular experiences and cogent demonstration from incontrovertible premises are the only modes of attaining the kind and degree of certitude which we require for a working philosophy of religious belief". "The more we examine the process of change in what is commonly accepted as knowledge, the more we find that the notion of 'verification by experience'—in the sense of 'verification by particular sense-perceptions'—is inadequate to explain or justify it. The criterion that we find really decisive, in case after case, is not any particular new sense-perception or group of sense-perceptions, but consistency with an elaborate and complex system of beliefs, in which the results of an indefinite number of perceptions and influences are combined." Hence he concludes that "if we are led to accept Theism as being, more than any other view of the Universe, consistent with, and calculated to impart a clear consistency to, the whole body of what we commonly agree to take for knowledge—including knowledge of right and wrong—we accept it on grounds analogous to those on which important scientific conclusions have been accepted" (p. 607). In an essay on 'Criteria of Truth and Error' (in MIND, January, 1900) he reviewed the Cartesian and the Empirical Criterion as well as Spencer's Universal Postulate, promising in a later article to deal with the problem more positively. The outline of a lecture on the Verification of Beliefs containing the substance of this unwritten article is printed as an appendix to the volume on 'The Philosophy of Kant and other Essays'. There we find him distinguishing three modes of verification. (1) The Intuitive or Cartesian, (2) what he calls the Discursive verification and (3) the Social or Œcumenical verification, most obviously illustrated by the consensus of experts. The second of these is the appeal to 'system and coherence,' and

Sidgwick concludes his sketch by saying: "I do not put these on a par. Indeed, it will be evident from the very words used that the second is of special and pre-eminent importance. For the ideal aim of philosophy is systematisation—the exhibition of system and coherence in a mass of beliefs which, as presented by Common Sense, are wanting therein. But the special characteristic of *my* philosophy," he somewhat curiously adds, "is to keep the importance of the others in view." Such passages seem to me to indicate an approximation on Sidgwick's part towards the general theory of knowledge held by contemporary Idealism.

The contrast between Sidgwick and T. H. Green is a striking study in temperamental differences. The contrast is suggested by the reissue in separate form of Nettleship's Memoir, which has hitherto been imbedded, and somewhat lost, in the Collected Works. There are also some interesting references to Green in Sidgwick's Memoir, notably the humorous account of Prof. Marshall's faithful dealing with his friend: "He contrasted my lecture-room, in which a handful of men are taking down what they regard as useful for examination, with that of Green, in which a hundred men—half of them B.A.'s—ignoring examinations, were wont to hang on the lips of the man who was sincerely anxious to teach them the truth about the universe and human life" (p. 394). In another passage Sidgwick himself half-sorrowfully admits the element of truth in this disadvantageous comparison: "I have been busy lately reviewing Green's posthumous book—*Prolegomena to Ethics*. I read it twice over carefully: the first time much impressed with its ethical force and persuasiveness: the second time unable to resist the conviction that my intellect could not put it together into a coherent whole—in fact that it would not do—and yet that probably it was better that young men should be believers in it than in anything I can teach them" (p. 380). "There is nothing in me of prophet or apostle," he says again in a strain of self-depreciation. It was the presence of this element in Green which made him the leader of a school. Green's inspiration was more definitely religious than Sidgwick's, in the sense in which religion and speculative thought are one. Hence the intensity of feeling with which he grasped the fundamental conception of his philosophy and laboured to impress it on his generation. His intense feeling of the unity of the world prevented him to some extent from realising the ambiguities of his own formula, and they explain "the monotony and iteration" of expression to which his biographer refers. In spite of Sidgwick's preoccupation with the theistic problem, his interest in the universe was a more purely intellectual one and he lacked the overmastering speculative impulse which lies at the root of all philosophical systems. "As to the riddle of the Universe," he says, "I never had the presumption to hope that its solution was reserved for *me*, though I had to try." This is not the spirit in which knight after knight has ridden out to take "the dark tower". The words may

be contrasted with an utterance of Green towards the close of his life: "I thought I had got hold of a key which I find now will not unlock so much as I fancied it would. But I must make a push now, or I shall leave the world with nothing done." Not so different in mood, the two sayings yet reflect strikingly the different starting-points and methods of the two writers. In the vital interests of philosophy it is no doubt better to embrace a supreme hypothesis like Green, even though the formula should on closer examination prove lacking and require much re-casting. This is what has happened in the subsequent history of Idealism in England, but it is a great thing to supply a generation with a principle by whose aid it may unify its moral and intellectual life. Sidgwick was constitutionally incapable of playing such a part. At a meeting of the Psychical Society, in whose investigations he was so deeply interested, he describes himself as "pouring cold water in a lucid and impartial manner" on more than nine-tenths of the experiences brought forward. Something of the same paralysing effect was produced by the keen play of his critical faculty on the systematic attempts of contemporary philosophy. But the lesson of scrupulous intellectual honesty is one no less important to be learned; and while acknowledging the weakness associated with the critical nature, Sidgwick rightly claims it as the source of his strength. As he puts it modestly in his delicately balanced way: "Certainly I find my self-criticism an obstacle to energetic and spirited work, but on the other hand I feel that whatever value my work has is due to it". Philosophy has need of both temperaments and uses both to help her on her way.

A. SETH PRINGLE-PATTISON.

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*The Philosophical Radicals, and other Essays; together with Chapters Reprinted on the Philosophy of Religion in Kant and Hegel.* By A. SETH PRINGLE-PATTISON, LL.D., Fellow of the British Academy, Professor of Logic and Metaphysics in the University of Edinburgh. Edinburgh and London: William Blackwood & Sons. Pp. x, 336.

THE volume before us contains a collection of Essays and Reviews which have appeared in various magazines during the last few years, together with two important papers reproduced from books which have long been out of print. All the writings here brought together are well worth republication in their present form; and there is no need to add that in every case their literary form is marked by a brilliancy, clearness, and force reminding one of the philosophical work of a century or a century and a half ago, when the men who wrote on these subjects for English readers were men who could both write and think in English.

The exigencies of editorial space of course will not permit any de-

tailed reference to all the various studies before us. The volume falls into three sections, the first of which consists of four Essays dealing somewhat fully with important thinkers and schools. Their titles are: "The Philosophical Radicals," a review of the work of the political school of Bentham and the two Mills, occasioned by the publication of Sir Leslie Stephen's volumes on *The English Utilitarians*; "Mr. Kidd on Western Civilisation," a review of this writer's second and larger work; "Martineau's Philosophy," a full critical discussion occasioned by the publication of Mr. C. B. Upton's account of the same subject in the second volume of the *Life and Letters of James Martineau*; and "Herbert Spencer: the Man and His Work," occasioned by the publication of Spencer's *Autobiography*. Then follow three book reviews: Prof. H. Jones's *Philosophy of Lotze*, Dr. J. M. E. M'Taggart's *Some Dogmas of Religion*, and the collection of *Studies in Logical Theory*, edited by Prof. J. Dewey. The book concludes with two most welcome reprints: "The Philosophy of Religion in Kant and Hegel," taken from a volume on *The Development from Kant to Hegel*, published in 1881; and an Essay on "Philosophy as Criticism of Categories," taken from *Essays in Philosophical Criticism* (1883). The unity of the collection is remarkable, considering the variety of topics indicated by these titles. It constitutes a series of studies on the implications of human personality as social. The work contained in it is thus complementary to that embodied in the author's last-published volume, *Man's Place in the Cosmos*.

The first Essay contains a study of forms of political doctrinairism which are not yet extinct. They reappear in the consideration of Spencer's work, where, in addition to a brilliant characterisation of Spencer as a man, there is shown the close affiliation of his latest political and evolutionary theories with the individualism and optimism of his earliest published speculations, together with a just estimate of the points in which modern thought is indebted to his work. Of special importance, for its direct bearing on present problems, is the criticism of Mr. Benjamin Kidd's political thinking, the philosophical and historical weaknesses of which are unsparingly shown, while at the same time the author is not blind to the value and importance of certain parts of Mr. Kidd's argument. Thus, when discussing the chapters on "The Position in Modern Thought" and "Western Liberalism," in *Principles of Western Civilisation*, Prof. Pringle-Pattison says:—

> Mr. Kidd has done good service, I think, in calling attention to the process of degradation which the principles of modern Liberalism have undergone in being separated from their ethico-religious presuppositions; and their inherent inability, when thus separated, to cope with a materialistic gospel of force, or with the many dangers which threaten our modern society from the unscrupulous pursuit of wealth, the immense accumulations of capital, and the hardening effects of selfish luxury. I have already commented on the injustice of Mr. Kidd's attempt to identify the materialistic interpretation of history with "a return to the standpoint of the

ancient world". It would be more correct to describe it as a reappearance among the Western peoples of the same canker which blighted the ancient civilisation. But apart from this misrepresentation, Mr. Kidd utters a well-timed warning. His book is a reminder of ideals which have moulded and directed our civilisation in the past, and which he rightly maintains to be essential to its continued existence (p. 74).

Prof. Pringle-Pattison finds that the philosophical writings of James Martineau afford an impressive example of "how far the intellectual framework of a man's beliefs may come short of embodying the animating principle of his thought, and how subtly pervasive is the influence of inherited conceptions which we imagine ourselves to have outgrown and even to be combating" (p. 105). In this case the "inherited conceptions" were mainly individualistic and deistic; and it is the weaknesses resulting from these that are chiefly commented on. The critic finds himself "in the ungrateful position, described in an apt phrase by Martineau himself, of 'saying Amen to the faith but picking holes in the dialectic'". The general estimate seems to me to be entirely just:—

His splendid insistence on the moral life and its implications, as furnishing the key to human existence and man's relation to the divine—the massive resistance which he offered to every attempt to explain ethical experience by other than ethical categories, whether baldly physical or of the metaphysical kind that are but physical in disguise,—these are in the spirit of Butler and Kant, and greatly helped to raise English thought from its inherited hedonism and necessarianism. . . . It is on such imperishable services to the common cause of idealism, rather than on the peculiar features which differentiate his own treatment from other systems, that Martineau's place in English thought will ultimately depend (pp. 82, 83).

I cannot pass from this part of the book without calling attention to the brief but exceedingly valuable and suggestive treatment of moral freedom (pp. 100-103) which seems to be an advance on what the author had said on the same subject at an earlier date (p. 229). The ethical question of Freedom concerns only the relation of the will to the moral ideal. To affirm moral freedom is to say, with Kant, that "ought implies can". Freedom, so understood, is *the category of morality*:—

The fact that the law can present itself to him is sufficient proof that a man possesses the capacity to realise its demands: it could not otherwise be a motive for him at all. As ethical being, there reside in him all the capacities of his race. What he ought to be, that he might be, and he judges his act accordingly, both while it is in process of contemplation and when he looks back, it may be remorsefully, upon his choice. . . . All things are possible to him—not as a finite individual at any given moment of time (the ethical consciousness guarantees no miracles) but eternally possible to every son of man. The absolute claim of the moral ideal, and its infinitely regenerative power in breaking the yoke of the past, seem to me the real facts to which the moral consciousness testifies (pp. 101, 103).

In an earlier discussion of this question, in which the same view is hinted at, the author added that "the point to be grasped in the controversy is that a man and his motives are one, and that consequently he is in every instance self-determined" (p. 230). This statement, which is one of the common-places of a certain school of ethical writers, has always seemed to me only to bury the ethical question under a heap of psychological and metaphysical difficulties; for it evolves two of the most ambiguous terms in the whole range of philosophical discussion—"self" and "motive"—the latter being what the late Sir A. Grant well called it, "nothing but a fossilised confusion". To give the statement any definite meaning, involves a whole psychology of volition and a metaphysical theory of the self. Martineau's view is really an attempt to justify certain *ethical facts* by a metaphysical theory that the will is an absolute cause, absolute, but acting through the phenomenal contents of mind. The phenomenal motor ideas, etc., are essentially related to the Will (which on this theory is the same as the Self); but the Self, as Will, is capable of absolute causal action, and therefore of absolute responsibility. Hence follows the use made of the common-sense distinction between the "character" and the "Self" which *has* the character,—a distinction which is made sharp enough for the moral act as such (the *choice*) to be wholly attributed to the Self, considered apart from the character, while the latter accounts only for the presentation of the phenomenal motor ideas as possible alternatives of action. We must agree with Prof. Pringle-Pattison that any such theory must be finally rejected, on the ground that agency cannot be predicated of a characterless Self (p. 102), and if the Self, *qua* agent, *is not* the character, the relation between them, implied in saying that the Self *has* the character, is broken down. Martineau was certainly wrong in supposing that the problem of the Self's relation to its character and motives (*i.e.* the problem of Substance and Attribute) is solved by the mere use of the word "has"; on the other hand, to say that "the Self and its motives are one" seems not only useless but definitely misleading.

What is called Pragmatism is so much in the air at present that one turns with much interest to the Review of *Studies in Logical Theory* (edited by Prof. Dewey at Chicago in 1893). The reader who desires to give sympathetic consideration to the arguments of this book, finds that Prof. Dewey and his coadjutors have not made sympathetic consideration a difficult or an impossible task, for "they speak without pretentiousness or undue contempt for the theories they claim to supersede". To these words of Prof. Pringle-Pattison, I would add that they have not made the mistake of supposing that in order to be "popular" in Philosophy, it is necessary to adopt the methods of the Yellow Press. Prof. Pringle-Pattison finds himself in entire agreement with the first main position laid down by the authors. It is not, how-

ever, a position discovered by pragmatists alone. The impossibility of the representational view of knowledge as a copy of reality,—the contention that "neither the plain man nor the scientific inquirer is aware, as he engages in his reflective activity, of any transition from one sphere of existence to another; he knows no two fixed worlds, reality on the one side and mere subjective ideas on the other; he assumes uninterrupted, free, and fluid passage from ordinary experience to abstract thinking, from thought to fact, from things to theories and back again" (Dewey)—and the fundamental assumption of *continuity* in and throughout experience; these principles have permeated the best thought of the day, and cannot be claimed by the pragmatists as due to an insight specifically their own. None the less, the authors are compelled to recognise an *objectivity* in knowledge. This is neatly shown by Prof. Pringle-Pattison:—

> After all, there is a nature of things to which our ideas have to adapt themselves if it would be well with us; and in this sense the real world is certainly independent of our ideas and unmodified by what we think about it. Why, according to the pragmatists themselves, it is the difficulty of coping with a "situation" which is the evoking cause of thought. Such a "situation" is the very type of an independent world, whose precise nature we have to learn with more or less expenditure of labour, if we are successfully to extricate ourselves from our difficulty. The primary function of Knowledge, in such a case, is to represent the situation accurately, in order to find a way out of it (p. 184).

Thought, the authors insist, always "comes after something and out of something, and for the sake of something"; it is "a kind of activity which we perform at specific need, just as at other need we engage in other sorts of activity". The phases of experience out of which thought comes, and to which it leads, are contrasted with it. Prof. Dewey states the relation thus:—

> There is always, antecedent to thought, an experience of some subject-matter of the physical or social world, or organised intellectual world, whose parts are actively at war with each other—so much so that they threaten to disrupt the entire experience, which accordingly for its own maintenance requires deliberate re-definition and re-relation of its tensional parts; this is the re-constructive process termed thinking (*Studies*, p. 39).

This contrast between "experiences" and "acts of thinking" implies that the word "thought" (or "knowledge") is used in a special and limited sense. It stands for a specific function within experience; it is used exclusively of the psychological process of solving a difficulty or arriving at a conclusion on some matter about which we are in doubt. But in this case, observes Prof. Pringle-Pattison (p. 188), debate as to the exclusively practical reference of "thought" becomes inept. "Thought," by definition, "depends upon unreflective experience for existence and upon a consequent experience for a test of final validity" (Dewey); hence the vital and fundamental question is as to the nature of these experiences antecedent and consequent

to acts of reflective thought. Prof. Dewey's exposition has the great merit of openly recognising the importance of this problem, though for the present he postpones the attempt to deal with it. He distinguishes between logic in the narrower sense, as the theory of "the particular functional situation termed the reflective" and "the logic of experience, logic taken in its wider sense". The latter deals with the question: "How does one type of functional situation pass out of and into another: for example, the technological or utilitarian into the æsthetic, the æsthetic into the religious, the religious into the scientific, and this into the socio-ethical, and so on?" Prof. Pringle-Pattison observes that the result of such an attempt would probably be "to limit and qualify the pragmatist position in such a way as to deprive it of much of its paradox and novelty, without robbing it of the truth and interest which it undoubtedly possesses" (p. 191). The problem of the "logic of experience" of course includes that question which some pragmatists seem to consider as scarcely worth even a casual reference: the nature and meaning of the various kinds of "goods" and various kinds of "practical consequences" for the sake of which, it is said, thought and knowledge exist.[1]

I must pass by the reviews of Prof. Jones's *Philosophy of Lotze*, and Dr. M'Taggart's *Dogmas of Religion*, in order to have space to speak of the two important reprints which occupy the last hundred pages of the volume before us. The author's account of "The Philosophy of Religion in Kant and Hegel" has been buried in a small volume[2] for years out of print. I must say frankly that it has always seemed to me an extraordinarily clear, concise, and adequate piece of exposition; and since what Kant and Hegel have to say on the significance of the historical element in Christianity is as fresh and suggestive as ever, the reappearance of this Essay may be heartily welcomed.

Sympathetic exposition and drastic criticism are best kept entirely distinct. This is most true of exposition and criticism of the Hegelian system; and the author of these Essays bore this in mind when he published *Hegelianism and Personality*. The reception of the latter volume in some quarters merely showed the curious fact that there were philosophers in England and America who regarded criticism of Hegel as the unpardonable philosophic sin; yet even

[1] *Cf.* paper by present writer in MIND, vol. xiv., no. 56, p. 508. As an example of the slovenly way in which this vital question is dealt with, take the following passage from Mr. James's recent volume: "'The true,' to put it very briefly, is only the expedient in the way of our thinking, just as 'the right' is only the expedient in the way of our behaving. Expedient in almost any fashion; and expedient in the long run and on the whole of course; for what meets expediently all the experience in sight won't necessarily meet all farther experiences equally satisfactorily. Experience, as we know, has ways of *boiling over*, and making us correct our present formulas" (*Pragmatism*, 1907, p. 222; the first two sentences are italicised in the original).

[2] *The Development from Kant to Hegel.*

these might have seen that the author had only modified, not abandoned, the positions of his earlier writings, particularly of *The Development from Kant to Hegel* and of the first Essay in *Essays in Philosophical Criticism.* Many readers of MIND will remember the appearance of the latter volume. "It was published," Prof. Pringle-Pattison reminds us, "in 1883, in somewhat belated connexion with the centenary of the *Critique of Pure Reason.* The volume was dedicated to the memory of Thomas Hill Green, who died in the previous year; and some prefatory pages by Dr. Edward Caird contained a fine tribute to the spirit of Green's life and teaching" (p. ix.). The Editors were the author of the volume now before us, and Mr. (now the Right Honourable) R. B. Haldane, assisted by a band of able contributors, most of whom are, happily, still with us. With regard to his own contribution, now reprinted, the author observes: "The nature of the universal self, and the difficult question of its relation to the individual selves of experience, obviously require more adequate treatment; but the main argument of the paper seems to me as sound now as it did twenty-five years ago" (pp. ix., x.). It will probably be admitted, now, that the metaphysical reality of a Universal Self is not forthwith established merely by showing that the content of self-consciousness is universal; and, while it is true that the individual self is from the beginning essentially related to the world physical and social, it does not follow that "the self is the world and the world is the self" or that "the relation between them is that of subject to predicate when the predication is supposed to be exhaustive" (p. 333). The main argument, however, is an exposition of the doctrine of Degrees of Truth in reference to the fundamental principles or categories presupposed by the various physical and moral sciences. In the first *Critique* Kant believed himself to have shown that knowledge is limited by the imagination; nothing is real (in the domain of knowledge) unless what can be constructed in relations of space. In other words, all real knowledge is based on mechanical categories alone. The other two *Critiques* virtually consist in the production of negative instances; they bring before us realms and aspects of experience which mechanical categories cannot explain, and which (if they are to be explained, yet not explained away) require other presuppositions. These other aspects of experience are more distinctively human, hence their corresponding categories may be said to be "higher". At the same time, the higher categories do not merely supersede or negate the lower; for instance, all experience has a mechanical aspect; and hence the mechanical interpretation of experience is to that extent justified, but becomes inadequate and ultimately self-contradictory if put forward as a complete account of experience. It is the business of philosophy, as theory of knowledge, to show the relation of the different points of view to one another, allowing to each a sphere of relative justification. Hence "philosophy . . . should possess a

complete survey of the categories and their connexion; but this *Wissenschaft der Logik* will probably never be completely written. In the meantime, it is perhaps better if philosophy, as critic of the sciences, is content to derive its matter from them and to prophesy in part."

S. H. MELLONE.

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*Pragmatism, a New Name for some Old Ways of Thinking; Popular Lectures on Philosophy.* By WILLIAM JAMES. London: Longmans, Green & Co., 1907. Pp. 309.

PRAGMATISM, according to Dr. James, is both an "attitude of orientation" and a theory of truth. As an attitude of orientation it is "the attitude of looking away from first things, principles, 'categories,' supposed necessities; and of looking towards last things, fruits, consequences, facts" (p. 54).

The first part of this does not describe Dr. James's position, while the second describes the position of every philosophy without exception. Pragmatism is itself a principle, the author's explanation of it involves numerous categories, and the course of his argument continually rests on asserted necessities. On the other hand all philosophies endeavour to describe and explain facts, including those which are the fruits and consequences of other facts. What is meant by first and last things—whether a temporal or logical order is spoken of—seems doubtful. But on either interpretation Dr. James deals with first things, as well as last, and all philosophers deal with last things as well as first.

We pass to Pragmatism as a theory of truth. And in this, the central part of the book, the difficulties of criticism are increased by the fact that Dr. James, though always picturesque, is very far from lucid. We find on page 45: "The pragmatic method in such cases is to try to interpret each notion by tracing its respective practical consequences. What difference would it practically make to any one if this notion rather than that notion were true? If no practical difference whatever can be traced, then the observations mean practically the same thing, and all dispute is idle." On the next page it is said, "Mr. Peirce, after pointing out that our beliefs are really rules for action, said that, to develop a thought's meaning, we need only determine what conduct it is fitted to produce: that conduct is for us its sole significance. And the tangible fact at the root of all our thought-distinctions, however subtle, is that there is no one of them so fine as to consist in anything but a possible difference of practice. To attain perfect clearness in our thoughts of an object, then, we need only consider what conceivable effects of a practical kind the object may involve—what sensations we are to expect from it, and what reactions we must prepare. Our conception of these effects, whether immediate or remote, is then for

us the whole of our conception of the object, so far as that conception has positive significance at all."

It does not seem clear from this whether "I have a bad headache" means practically the same thing as "I have not a bad headache" in the case where my conduct would remain the same with and without a headache. On the one hand, we are told that the conduct a belief is fitted to produce is its sole significance. The difference then, it would seem, would have no significance. On the other hand it would certainly "make a difference" to me whether I had a headache or not, and the "sensations I am to expect" would be different. And this seems to indicate that the difference has some significance.

If this ambiguity were cleared up we should know in what cases one position can be said to be true and another to be false. But which of them is true, and which false?

Truth, according to Dr. James, is a quality of nothing but beliefs. "The 'facts' themselves . . . are not *true.* They simply *are.* Truth is the function of the beliefs that start and terminate among them" (p. 225).

No one ever supposed that truth was a quality of facts in the sense in which Dr. James employs the word "facts"—a sense which seems to be the most convenient use of the word. But when he confines truth to beliefs he denies the existence, between the facts and the beliefs, of an intermediate class of realities called propositions, some of which are true and some false. The reality of these "propositions" has been discussed by Mr. Russell and Mr. Moore. My own opinion is that Dr. James is right in rejecting them, but the question is very difficult, and it seems unfortunate that he should have asserted his conclusion without attempting to meet the arguments on the other side. Perhaps, however, he regarded them as too abstruse for a popular course.

What, then, is the difference between a true belief and one which is not true. "Truth is *one species of good,* and not, as is usually supposed, a category distinct from good, and co-ordinate with it. *The true is the name of whatever proves itself to be good in the way of belief, and good, too, for definite assignable reasons*" (p. 75).

This first sketch is worked out in the chapter on The Notion of Truth. Here we read: "Truth, as any dictionary will tell you, is a property of certain of our ideas. It means their 'agreement,' as falsity means their disagreement, with 'reality'. Pragmatists and intellectualists both accept this definition as a matter of course. They begin to quarrel only after the question is raised as to what may precisely be meant by the term 'agreement' and what by the term 'reality,' when reality is taken as something for our ideas to agree with" (p. 198).

The first thing that we learn as to the nature of agreement is that it is, in some cases, though not in all, a process of copying. 'Our true ideas of sensible things do indeed copy them. Shut

your eyes and think of yonder clock on the wall, and you get just such a true picture or copy of its dial" (p. 199).

There is a verbal inconsistency between these passages and the two quoted above, which call truth a quality of *beliefs*. Here, we are told, it is a quality of *ideas*. But this is probably a mere slip of the pen, and we shall get Dr. James's meaning by reading "beliefs" in these cases likewise.

A belief is true as far as it is good for assignable reasons, and it is true as far as it agrees with reality. Dr. James has therefore to show that to be good for assignable reasons and to agree with reality either mean the same thing, or, if not, are so connected, that one must be true of everything of which the other is true, and to the same degree. (Goodness is, of course, a matter of degree, and so is agreement with reality, as treated by Dr. James.)

Moreover, when we are dealing with sensible things, he will have to prove that a belief which is a faithful copy of a sensible thing is always a better belief than one which is an imperfect copy of that sensible thing. For in this case the true belief has been stated both to be the good belief, and to be the belief which copies the sensible thing.

A belief agrees with reality, according to Dr. James, when it "works". This short and convenient phrase is found on page 216, but he has already given two descriptions of this agreement. When our ideas agree with reality, he says on page 201, "they lead us through the acts and other ideas which they instigate, into or up to, or towards other parts of experience with which we feel all the while —such feeling being among our potentialities,—that the original ideas remain in agreement. The connexions and transitions come to us from point to point as being progressive, harmonious, satisfactory. This function of agreeable leading is what we mean by an idea's verification." And again "To 'agree' in the widest sense with a reality *can only mean to be guided either straight up to it or into its surroundings, or to be put into such working touch with it as to handle either it or something connected with it better than if we disagreed*" (p. 212).

These two definitions do not seem quite consistent. The first suggests that the good which is truth may be one which makes the belief good intrinsically. The belief is good because it leads in an "agreeable" manner, which would be an intrinsic good. But the second suggests that the goodness of the belief is merely goodness as a means. It is good only because it is a means to good action. In either case, however, goodness of some sort comes in, as constituting agreement, and the definitions of truth on pages 75 and 198 are thus held to be harmonised with one another.

Let us suppose that I believe that God is powerful, and that this belief is true. What does this belief tell me about? It professes to tell me about God. But, according to Dr. James, it does not do so. For the truth of the belief is the agreement of the belief with

reality, and this agreement is that the belief works. And when we inquire what we should learn by knowing that the belief that God is powerful works, and turn to the definitions on pages 201 and 212, we find that we should learn a great deal about the belief but nothing about God or about power. Thus Dr. James's position leads to the singular consequence that an assertion about anything is never an assertion about that thing, but about something quite different.

And this singularity leads to difficulties. "God is powerful" is true. This *means*, according to Dr. James, that the belief that God is powerful works. The working of the belief is not the cause or reason, nor the effect or consequence of the truth. It is not connected with the truth of the belief in any way. It *is* the truth. Then what I mean when I say that God is powerful is that the belief that God is powerful works. My assertion is changed into an assertion about my belief.

But an assertion about a belief, like any other, will mean that a belief about it will work. So my assertion has now changed into an assertion that the belief "the belief that God is powerful works" does itself work. We are now making an assertion about the second belief. And this assertion is again an assertion that the belief "the second belief works" does itself work. And so on *ad infinitum*. No assertion can have any meaning. For, according to the theory before us, if it had a meaning it would not mean that meaning, but something about the belief in that meaning.

With regard to "ideas of sensible things" an obscurity arises. Suppose that X sees a lion on the point of devouring, as he supposes, a stranger. X is about to shoot the lion, when he recognises that the victim is not a stranger, but his dearest friend. In his increased agitation his hand trembles, and his bullet kills his friend, instead of the lion. Is his recognition of his friend a true belief or not? On the one hand it would seem that his perception of his friend's features is what Dr. James would call a copy of a sensible thing, and so the belief would be true. But there seems to be no "agreeable leading" in such a belief, and X certainly does not "handle either" his friend "or something connected with" his friend better than if he had not had the belief. On the contrary the belief causes him to fail in a purpose in which he wishes to succeed and in which it would be generally admitted that it would be well that he should succeed. Does the belief "work" then, according to either definition? And, if it does not work, is it true?

Dr. James offers two arguments for his position. The first is that certain other systems have broken down. Of the "copy theory" he holds that it is true in some cases, and only in some. It seems to me—though the subject is too wide to discuss here—that he concedes too much. The "copy theory" has seized a very important element of all truth, and seems to me in every case much closer to a correct solution than the theories either of Dr. James or

of Dr. Baillie. But in no case can it be accepted as actually the correct solution.

For the rest Dr. James criticises, rather casually, two systems which, if his view of them is correct, share the fundamental vice of his own system, since they endeavour to reduce truth to an ethical conception. And he notes that Mr. Joachim is incompletely satisfied with his own position. But, even supposing that "the copy-theory," Prof. Taylor, Prof. Rickert and Mr. Joachim had all been proved wrong, we should not have got much nearer to proving that Dr. James was right.

This second argument, if I understand him rightly, is an appeal to the common belief that truth is good. "Surely," he says (p. 76), "you must admit this, that if there were *no* good for life in true ideas, or if the knowledge of them were positively disadvantageous, and false ideas the only useful ones, then the current notion that truth is divine and precious, and its pursuit a duty, could never have grown up or become a dogma. . . . 'What would be better for us to believe!' This sounds very like a definition of truth. It comes very near saying 'what we *ought* to believe': and in *that* definition none of you would find any oddity. Ought we ever not to believe what it is *better for us* to believe? And can we then keep the notion of what is better for us, and what is true for us, permanently apart?"

So far, however, from the general sense of mankind accepting 'what would be better for us to believe' as a *definition* of truth, they do not even accept it as a proposition universally true about truth. (It seems worth while to point out that not every proposition which universally holds of a subject can be taken as a definition of that subject.) "Smith is a fool, but happily his wife thinks him a wise man." "That boy is exceptionally clever, and unfortunately he knows it." All of us are continually hearing judgments of this type, and most—if not all—of us are continually making them. And they affirm that in certain cases it is better not to believe the truth, and even better, sometimes, to believe the contrary falsehood.

True beliefs are indeed in most cases considered good. But when they are considered good it is always for a reason. Either they are held to be good for a reason unconnected with their truth, as when a man says "God exists, and, even if he did not, it would be well that we should believe he did". The reason here, whatever it may be, has no relation to the truth of the belief. Or else their truth is the reason, or an essential part of the reason. "The world is very evil, and, since it is so, I am glad that I have found it out." "It is desirable to know that that chair is in a draught, since it is in a draught." Such statements as these last two imply that if the world was not evil, or the chair not in a draught, the beliefs in question would not be good.

Such judgments, that true beliefs are good, are so far from confirm-

ing Dr. James's position that they are quite incompatible with that position. If the goodness of a belief is independent of its truth, the truth cannot be identical with the goodness. And if the truth of a belief is the reason of its goodness, again its truth cannot be identical with its goodness.

Dr. James now restates the position of Pragmatism. "The alternative between pragmatism and rationalism, in the shape in which we now have it before us, is no longer a question in the theory of knowledge, it concerns the structure of the universe itself." The new form is as follows: "The import of the difference between pragmatism and rationalism is now in sight throughout its whole extent. The essential contrast is that *for rationalism reality is ready-made and complete from all eternity, while for pragmatism it is still in the making, and awaits part of its complexion from the future*" (p. 257).

This appears to be held by Dr. James to be, not an independent doctrine to be believed as well as the Pragmatist theory of truth, but a consequence of that theory. But I cannot see any connexion. If any one held the Pragmatist theory of truth, and at the same time denied the reality of time (a position which would not, I think, present greater difficulties than are essential to all Pragmatism) he would have to deny the "plasticity" of the universe, as formulated above by Dr. James. On the other hand, any one who accepted the reality of time, whatever his theory of truth, would have to admit that the universe was still in the making.

Dr. James appears to confuse the doctrine that existence is timeless (which is held by some rationalists, but has nothing to do with their theory of truth) with the doctrine that there is a timeless truth apart from our beliefs (which is part of the theory of truth of some rationalists). The two doctrines are often held separately. Mr. Moore holds the second without the first, and I myself hold the first without the second.

The second doctrine is quite consistent with the assertion of the plasticity of the universe. According to this doctrine there is a true proposition "the date of the battle of Waterloo is the 18th June, 1815," which is quite a distinct reality from the battle, on the one hand, or any person's knowledge, on the other hand. And this true proposition is eternal and unchanging. But the doctrine does not deny that the battle, and the knowledge, are separate realities from the proposition. And if time is real, *those* realities change. The universe was really different during the battle, and after the battle. And it is also really different, though not so much so, every time that a fresh school-boy learns, or forgets, the date.

J. ELLIS MCTAGGART.

*Aristotle on his Predecessors, being the First Book of his Metaphysics.* Translated with Introduction and Notes. By A. E. TAYLOR, M.A., Fellow of Merton College, Oxford; Frothingham Professor of Philosophy in MacGill University, Montreal. Chicago: The Open Court Publishing Co., 1907. Pp. 160.

PROF. TAYLOR'S latest work will be read with high expectations by all those who know his essays on the Parmenides, published in this journal. And his readers will not be disappointed by this singularly fresh and interesting piece of work. The translation is thoroughly scholarly and at the same time probably as lively as a translation of Aristotle can well be made. Prof. Taylor has not been satisfied with a rendering which by merely giving word for word evades all the difficulties of the original thought. He has not hesitated to expand where this is necessary in order to bring out the connexion of thought, and where more is needed than can fairly be put into a translation, he is ready with a concise and useful note. The introduction gives an excellent sketch of the background of fact and of thought which one must know in order to understand Aristotle's history of his predecessors in philosophy; and the appendix collects some of the most important illustrative passages from other parts of his works. Prof. Taylor's sympathies are clearly with Plato rather than with Aristotle, and in particular he frequently charges Aristotle with mathematical incompetence. We may take leave to doubt whether the author of the Physics can have been so bad a mathematician, relatively to the position of the science in his time. And another statement, that Aristotle had little interest in mathematics, and that accordingly his logic is cast in a form borrowed rather from biology than from the exact sciences, seems even more open to question. Not only some of the terminology (*e.g.*, ἀξίωμα, αἴτημα), but a majority of the illustrations in the *Posterior Analytics* come from mathematics; and there seems to be little doubt that although Aristotle did not fully understand the method of mathematics, he made what he conceived to be its method the formula of all scientific procedure. Nor does Prof. Taylor appear to be really successful in his defence of the late Platonic theory against what is the gist of Aristotle's attack—that the ideas and the ideal numbers, considered as separate in any other way than for thought, are a hypothesis which explains nothing and cannot itself be explained.

We may now mention some slight points in which the book seems capable of improvement:—

P. 22. In the translation of E 1026 *a* 10-13 the false antithesis, speculative science, Physics and Mathematics (which *are* speculative sciences), rests on a mistranslation.

P. 23. 'Universal mathematics' is not arithmetic, but something more universal, such as is found in Euclid's treatment of proportion (*Post. An.*, 74 *a* 17-25).

Pp. 61-63. The references to Ritter and Preller, and to Gomperz,

are not quite up to date; while the ascription of a complete fourth edition to Zeller is an anticipation, though, we may hope, an intelligent one.

P. 68. 981 *a* 1. Prof. Taylor seems to follow Blass and Christ too readily in suspecting glosses and late additions. Blass's theory of an original 'hiatus-free' Book A is somewhat fanciful, and even a plausible demonstration of it can be got only by adopting the readings now of $A^{\upsilon}$, now of E, in the most arbitrary way. For other passages where the text may be defended against Prof. Taylor's attack cp. 981 *b* 25, 984 *a* 3, 993 *a* 9.

P. 69. 981 *a* 12. The sense is improved by the adoption of Prof. Jackson's certain emendation, the omission of ἤ before πυρέττουσι.

P. 70. Either the whole gloss 981 *b* 2-5 should have been translated, or the whole omitted.

P. 84. 984 *a* 29. ἐδυσχέραναν ἑαυτοῖς is 'were dissatisfied with themselves' rather than 'gave themselves trouble'.

P. 86. 984 *b* 21. The sense seems rather to be 'the principle they posited was at the same time the cause of beauty and the efficient cause'.

P. 87. 984 *b* 32. 'The contraries of the various kinds of good.'

P. 90. 985 *b* 9. Perhaps a simpler emendation is τοῦ κενοῦ τὸ σῶμα.

P. 96. 986 *b* 12. 'Logical character' seems an unlikely translation of φύσιν. Is not the meaning of φύσιν fixed by φύσεως in l. 11 as 'the nature of the entity in question'?

P. 97. 987 *b* 2. Is not the meaning, as Alexander suggests, 'who have sat in council with us'?

P. 98. 987 *a* 10. μετριώτερον seems the least likely reading, μαλακώτερον perhaps the most likely. It is unlikely that all the other readings, so like one another, should have been corrupted from one so different as μετριώτερον.

P. 99, *n.* 2. The identification of 1 with the point and with the soul is not 'a consequence which actually followed' from the mistake Aristotle is here attacking. Alexander's first interpretation appears to be the right one. If 'the square' was identified with 4 (the first square), then friendship, which was identified with 4, might come to be identified with any square, and thus the one be many.

P. 103, *n.* 2. There is no exact agreement with Parmenides, 143 C—144 A, and it is doubtful whether the passage in the Parmenides can be what Aristotle had in mind. Plato there makes no distinction between prime and other numbers. He distinctly implies that all numbers are either ἄρτια ἀρτιάκις or περιττὰ περιττάκις or ἄρτια περιττάκις or περιττὰ ἀρτιάκις. And the method of addition, by which he gets the number 3, would enable him to generate primes as well as multiples.

P. 107. 988 *b* 14. μὴ λέγειν *here* must mean 'fail to say,' not 'deny'.

P. 118, *n.* 2. Surely Aristotle's argument is rather that if there must be an Idea answering to every common name, there must be an Idea answering to all the things that are 'not beautiful,' 'not good,' etc.

P. 119, *n.* 3. Prof. Taylor surely underestimates the force of the τρίτος ἄνθρωπος argument. Plato states it in the Parmenides, not merely 'without formally indicating his answer to it,' but with the admission that as yet he has no answer. And if it be said that '"man" is not a member of the class "men,"' Aristotle held (and Plato's language gives much ground for the view) that Plato, in 'separating' the idea, deprived it of genuine universality and made it one individual among others.

P. 121, l. 6. Read 'substrate' for 'substitute'.

P. 121. 990 *b* 34. It seems clear that Alexander read not οὐσίας, but οὐσία or οὐσίᾳ (p. 91, 11, ed. Hayduck). Alexander does not interpret the passage well, but the sense seems to be as follows. L. 28. If things are to derive their nature from participation in the Ideas, they must not participate in them indirectly by participating in substances in which Ideas inhere. The Ideas must themselves be substances inhered in. Now (l. 34) the same sort of things must be indicated by the term 'substance' in the real as in the ideal world. ∴ (the conclusion of the enthymeme is easily supplied) as the Ideas are substances, the things to which they answer must be substances too.

P. 128. 991 *b* 28. It was not the studies but their objects that were called 'intermediate'. A comma should be read after ἀριθμητική.

P. 128, *n.* 2. Aristotle's contention is that *any* 2 (definite or indefinite) must contain two units. This contention is surely true, and is surely no more 'inaccurate' or 'loose' than the statement 'that 2 is the number determined by the addition of 1 to 1'. The Platonists cannot have been right in treating *any* sort of 2 as an ultimate principle co-ordinate with 1.

P. 129, l. 4. 'Should' has dropped out after 'Platonists'.

P. 132, l. 15. Read 'turned' for 'termed'.

P. 135. 992 *b* 19. The clause beginning 'especially when' contains nothing that is not contained in the principal clause. The stress must be on τοῦτον τὸν τρόπον, *i.e.*, 'in the Platonist way,' which looks for the same elements, one and dyad, in all the categories.

P. 144. A bracket has dropped out before 'as'.

P. 145, l. 18. 'Does not occur universally' is ambiguous. Read 'is absent universally'.

P. 146, *n.* 2. γνωστικωτέρων is surely active in its sense.

P. 155, D. Aristotle expressly says (1076 *a* 22-28) that in this passage he is to discuss τὰ μαθηματικά *out of relation to Ideas*. The discussion of Ideas does not come till 1078 *b* 9. This seems to have misled Prof. Taylor in his interpretation of the passage. *N.* 2

on p. 156 is not correct. The theory in question involves only one kind of solid other than the perceptible solid—*viz.*, the abstract solid of mathematics, *e.g.*, the absolute sphere. The theory involves three kinds of plane:—

(1) The mathematical plane got by abstraction from the perceptible surface.

(2) The plane in the mathematical solid.

(3) The plane abstracted from the mathematical solid. (See 1076 *b* 30-32?) Aristotle seems to be careless in the enumeration of the lines and points involved in the theory. On the principle he applies to the plane, there should be seven kinds of line:—

(1) That abstracted from the sensible line.
(2) That in plane (1).
(3) That abstracted from plane (1).
(4) That in plane (2).
(5) That abstracted from plane (2).
(6) That in plane (3).
(7) That abstracted from plane (3).

And on the same principle there should be fifteen kinds of point. But Aristotle wearies of the σώρευσις.

In spite of these criticisms of details, the main impression which the book leaves is that of a very thorough and able piece of work.

W. D. Ross.

# VII.—NEW BOOKS.

*A New Interpretation of Herbart's Psychology and Educational Theory through the Philosophy of Leibniz.* By JOHN DAVIDSON, M.A., D.Phil. Edinburgh: William Blackwood & Sons, pp. xviii, 191.

THE trouble with 'interpretations' is, that so frequently they lead the reader away from the original author. Dr. Davidson's book, however, is an exception. It would indeed hardly be intelligible unless the reader already was acquainted with Herbart's writings. The difficulties in Herbart himself are great, and probably all readers would wish that he had written in a style at once more attractive and more lucid. But he has to be taken as he is, on pain of accepting something perhaps better, perhaps worse, but different from Herbart. Frankly, we admit, it is easier to read Dr. Davidson than Herbart. Our interpreter has the great merit of clearness. We can almost always, at first reading, tell what he means. He hits the bull's-eye often, like a trained marksman, and now and again we find ourselves counting up his scores, which we realise are very high.

We get a philosophy of education, and a very interesting one. We go back to Socrates who argued that virtue can be taught; that the ignorant man cannot be truly virtuous; and that knowledge is virtue. We recognise that Herbart taught the same doctrine, and put it into pedagogic form. But getting into closer quarters with speculative questions, Dr. Davidson's thesis is that Leibniz is a better starting-point for the interpretation of Herbart than is Kant. Accordingly, the philosophical theory of Leibniz is expounded, and expounded with great clearness. So clear and interesting is the exposition that we are led to wonder how Leibniz would himself have developed an educational theory and method from his philosophical principles. But Dr. Davidson is satisfied with showing that for Leibniz there is 'no ego existing apart from that which is to become a fact to it'. The ego and its contents are one and indivisible in reality, whatever they may be for purposes of analysis. The mind is a monad, whose life consists in 'appetition,' and 'perception,' and the object of perception is the universe implicitly implied contained within the monad's own life. This representation of this universe at first takes place in a very confused manner. Such confused mode of perception by the monad is what is known as external matter. Interaction between one monad and another is only seemingly real and is produced by pre-established harmony.

From such a system of thought, Leibniz naturally holds that 'subject' and 'object' are inseparables, without meaning if taken independently. Dr. Davidson attempts to show that on Leibniz's principles the interaction between one monad and others may be real and not merely one which requires a theory of pre-established harmony for its interpretation. Leibniz's theory of feeling and will is founded on his theory of knowledge. There is a similar relation in Herbart. Dr. Davidson contends that

the Herbartian 'soul' is substantially the Leibnizian 'monad'. Given the metaphysical ground-work of Leibniz's and Herbart's theories as the same, the psychological up-build of presentation, feeling, desire and will are shown by Dr. Davidson to be interpretable on similar lines.

The later chapters of Dr. Davidson's book contain a valuable exposition of Herbart's views of the concept of interest, and its implication. He also makes the occasion for a deduction from the Herbartian psychology of the fallacy of formal education and treats of the relation between individuality and many-sided interest.

It is often said that Education is independent of all metaphysical theories. We are inclined to think that the study of such a book as this of Dr. Davidson, will show that this position cannot be sustained. Whether the 'soul' is an entity which, so to say, deals with its presentations and moulds them into a unity of purpose of its own, or whether the soul simply emerges into consciousness by the inter play of presentations, is built up of them, and is itself, so to speak, the mosaic formed into a pattern by the relationships established by the presentations amongst each other, will bring the educational question: Are we to attempt to develop the soul by presentations, or from presentations to develop a soul? Does self-activity mean the same thing as "many-sided interest"?

Dr. Davidson is quite clear that Herbart affords a better resting-place in metaphysics than does Hegel for the theory of Education. His last chapter is entitled "Interest *v rsus* Self-realisation as the First Principle of Education". He does not seem to be willing to admit that these two principles may be from an educational point of view complementary. He insists on regarding them as alternative. Against the theory of self-realisation as the educational end Dr. Davidson urges that the "self" can be as completely realised along the line of vice as along that of virtue. But surely precisely the same criticism applies to 'interest'. What guarantee is there that 'interest' quâ interest secures the 'right' sort of 'interest'? It is objected against 'self-realisation' that it has 'no definite connotation and affords no guidance for educational practice,' whilst 'interest' implicitly contains a whole educational theory whose fundamental postulate is that very self-activity whose absence the Herbartian critic so much deplores!

Yet Herbart himself declared that the application of the test of a teacher's success with a pupil must be deferred for thirty years, half a lifetime, before it can be decided whether the education given was such that the educand perceives from later experience and self investigation, really suited and promoted his development The fact is that the term 'interest' is ambiguous; it describes a process, and it also is used by Herbartians to indicate an 'end' of life—the creation and development of right 'interests'. So far from accepting Dr. Davidson's view of the definite connotation of interest, it is a question whether Education does not suffer as much from the use of the term as Economics suffers from the popular terms 'wages,' 'profit,' 'rent'.

Dr. Davidson, again, trenchantly urges against 'self-realisation' as an educational aim: "The obtrusion of the 'self' in the expression of a working base principle of ethical life is only too apt to be self defeating, as leading the individual falsely to identify the *direct* interest in self with the moral life. What is wanted in national, social and individual life is an outlook away from the self—a Herbartian interest, which is an interest in anything but the self." But Rosenkranz has dealt with this very point, and shown that self-activity as an educational process must be developed by self-estrangement.

Dr. Davidson considers 'self-realisation' an inferior ethical end to the

Buddhist Law of Righteousness which enjoins on men *the duty of destroying the illusion of self-hood*. Ignorance, as Herbartians and the best Buddhists declare, is "the source of all moral wrong". But let us remember it is ignorance which makes the ignorant a flock of sheep; it is knowledge, or let us rather say, wisdom, which makes them individuals. And Dr. Davidson recognises the development of individuality as an educational principle as readily as a Hegelian.

Sufficient, however, has now been said to show that Metaphysics plays an important part in the discussion of the place of the educational theory of Herbart, however much educationists insist on the educational independence of Herbart's contribution to practice from his theory.

Dr. Davidson deserves recognition for his attempt to face the problem in connexion with Herbart, and his adverse criticism of the Hegelian standpoint will stimulate discussion and promote thought amongst educationists.

One of Dr. Davidson's views certainly should be brought out into the open for discussion. He holds a very high opinion of the function of the State in connexion with Education. The State, apparently, is to regulate the "differentiation of the education suitable for different individuals and communities in the State". The individual must be encouraged "to travel along the lines of interest already known to him in so far as these tend in the right direction". Dr. Davidson chooses as an instance the town-child and the country-child. Each, apparently, should be developed along the lines of his own town or country interests.

This seems to us, we confess, perilously near to the suggestion that all "bents" of nature and condition should be steadily cultivated. On this point Herbart himself has told us that such procedure is like the wish to exaggerate the humped-backness of an individual, who is already thus marked, and certainly if it does not militate against 'many-sidedness' of interest, Dr. Davidson here is not in close keeping with the ideal of all-roundness. The interference of the State, quite apart from any abstract *laissez-faire* objection, does not seem to be likely to perform much for the good of the *individual*, in determining his surroundings, or process of education, whilst in the State schools the number of children entrusted to one teacher is so large, nor can one imagine Local Authorities likely to determine questions of local environment in the education of each individual child, with due absence of prejudices and preconceptions.

Dr. Davidson's later chapters leave Leibniz behind, or if they take him with them, do so by transfusion into modern thought by a method which would almost, if not entirely, have enabled Dr. Davidson to have brought Kant or Hegel into a similar position. But Dr. Davidson is greater than his particular thesis. He has brought a well-stored mind, an acute judgment, and an unusually lucid power of exposition, illustration and teaching into his pages. He is a teacher of, as well as thinker on, educational science or if you prefer, speculation, and there are few recent writers on educational philosophy of greater clearness.

FOSTER WATSON.

*An Introduction to Philosophy.* By GEORGE STUART FULLARTON, Professor of Philosophy in Columbia University. The Macmillan Company, 1906. Pp. xiii, 322.

Some professors in America follow a plan common in Germany, but very rarely practised, I believe, in England, of printing an outline of Lecture-courses, something between a syllabus and a manual, in order to give a bird's-eye view of the subject and to facilitate the comprehension of every part by being able to refer it to the total scheme.

Such a work is Prof. Fullarton's *Introduction to Philosophy*, and it seems to be well suited to its purpose. Whether that purpose is a good one must depend upon whether a course of lectures is to be little more than another book with extensive footnotes, or whether it is to be a free communication of ideas, personal and dramatic. The only excuse for giving a lecture, I should say, is to make it something as different as possible from the reading of a book.

But there is another use for such an *Introduction* as the one before me: it might be put into a student's hands whilst he was still doubting whether, or not, Philosophy should be his pursuit, or his principal pursuit. Here, one might say to buoyant youth, here is a map of the road. Observe the Slough of Despond, the Hill of Difficulty, how the path swerves wide of that agreeable city, Vanity Fair; Doubting Castle is conspicuous from every point of view; and at the end of the journey shines New Jerusalem, depending for its population upon the arrival of successful pilgrims, and still uninhabited. Buoyant youth might then take the road, or not, at his own discretion, knowing the worst; and if he would go, his blood would be upon his own head.

'Knowing the worst'? Why, no: that would be very unfair to Prof. Fullarton's good sense and lucidity. Still, in his agreeable way, he shows the student over the whole field of thought, discussing the outlines of the history of philosophy, the problems of the external world and of the mind, some types of philosophical theory, the relations of the philosophical sciences, the utility of philosophy and the spirit in which it ought to be studied. He gives everywhere references for further reading; but in the chapters dealing with the external world and the mind, he follows especially his own *System of Metaphysics*, reviewed in MIND, N.S., 58. The whole is written with so much reasonableness and moderation that, I should think, many other teachers whose method required such a book, would find it useful, even if they did not entirely agree with the author's opinions.

The only startling doctrine that I have met with in the book occurs in § 38. Having already shown that mental phenomena cannot occupy space, he here argues that "no series of mental changes can occupy any portion of time, real time, or even fill a single moment in the stream of time". Real time is the schema of physical processes, or causation, in which mental phenomena have no place. A sensation, strictly speaking, is not in time at all; real duration can only be predicated of the physical concomitant. The word 'real' is important; for a sermon or a dream may have *apparent* duration, may seem long, though whether they really are so can only be measured by the clock or some physical standard. This doctrine, then, is exactly contrary to the ordinary derivation of time from subjective experience of change. For my part, I have always viewed the common doctrine with suspicion, because subjective changes want the definiteness and regularity that characterise time; but it is another thing to exclude them from time altogether. If not in time, how can they be concomitant with physical processes? As to the illusoriness of subjective time, nothing is fuller of illusions than the perception of space. But, to the best of my judgment (though I hardly like to trust it in this case), what has misled Prof. Fullarton is the word 'occupy,' which is properly applicable only to space. Space may at a certain point be occupied by one body to the exclusion of all others; but there is no mutual exclusion amongst the changes that occur in time. Time is never 'occupied'. One reason why mental phenomena have no true spatial character is that they have no power of excluding bodies. But in time, mental changes and physical changes are all non-exclusive of one another in just the same way. It is true that subjective

processes are usually less definitely measurable than physical changes; but then physical changes are known by observations that are infected by subjective error, and have to be averaged and corrected. If, then, we deny real time of thought, we must also deny it of perception; and 'time' will become a name for abstract regularity, which is not characteristic of any actual experience, and which no actual experience can be said to be 'in' or to occupy.

Restraining the impulse to comment upon everything, I may say that amongst the later chapters of the book the thinnest is the one on Logic; but, then, the subject is thin. In the chapter on Metaphysics the conclusion is that epistemology cannot be separated from Metaphysics and made a separate discipline; and this seems to me to be true. The practical admonitions that conclude the volume may be taken to heart not by students only: "Be prepared to enter upon a new way of looking at things"; "Remember that ordinary rules of evidence apply".

C. R.

*Sociological Papers.* Vol. iii. By G. Archdall Reid, W. M'Dougall, J. L. Tayler, J. Arthur Thomson, Patrick Geddes, A. E. Crawley, R. M. Wenley, W. H. Beveridge, G. de Wesselitsky, Mrs. Sidney Webb and H. G. Wells. Published for the Sociological Society. London: Macmillan & Co. Pp. xi, 382.

The unity formed by the papers in this volume is somewhat obscure, but in the nature of the case it must be so. 'Sociology' is not the name of a science, but is a term embracing a variety of studies on different planes, all of which have some social reference. Some link on to natural sciences, others are philosophical, others again economic, political or historical. Four of the papers now published by the Sociological Society are chiefly or largely biological. Dr. Archdall Reid deals with problems of heredity and variability. Dr. Tayler expounds the theory that sociology is founded on 'Individuology,' *i.e.*, that the characteristics of individuals are ultimately responsible for social formations. In Professor J. A. Thomson's contribution stress is laid upon the social inferences which may be drawn from biological teaching in its application to the human race. Mr. M'Dougall, also starting from the biological approach, makes a practical eugenic suggestion. Shortly expressed, it is that the children of the educated middle-class who have succeeded should be paid for. The proposal is put forward primarily with reference to the Civil Service and the academic profession. In these callings are to be found first-class selections from the University men in the United Kingdom. It is proposed that salaries should rise with marriage, and then according to the size of families, as well as by seniority and proved capacity; and the hope is expressed that the 'reform' would spread. Except where the intention of the service is to buy the whole of a man's life, in which case provision for salaries to rise with marriage and the size of the family at the expense of bachelors could be regarded as of the nature of insurance against the eventualities of life, like pension schemes, the suggestion lays the axe to the root principle of remuneration in society as at present constituted, *i.e.*, that payment should be made in proportion to value of work done. Mr. M'Dougall no doubt would argue that rearing a family of a particular quality is valuable work done for society which ought to be paid for. But in spite of the persuasiveness of Mr. M'Dougall's advocacy one is beset with doubts. Is it clear that the native qualities of these families would ordinarily be above the average? The answer that biology teaches

this would not be correct. It is a conclusion founded upon moderately well-established doctrines of biology and certain social inferences. It is upon the latter that I am most inclined to cast doubt. If the child inherits a type and not the acquired characteristics of the parents, it has yet to be proved that the University man should be encouraged in the interests of society to have more children. Many of the successful University men, indeed, have come from the poorer classes, and many more might have come from them under a more internally mobile social system. Assuming that a special type succeeds in this way, and that more of such people so trained are needed, it would *prima facie* seem to be wiser to aid more of that type to enter their kingdom than to tempt those already discovered to be more prolific. Why artificially upset the balance of types before it is at all accurately known what the balance is! Moreover, no rule governs the selection of the mothers. And is the plan practicable? Imagine the situation created under present conditions, according to which each University in the United Kingdom is left free to manage its own finances, by the application for a University chair of two equally suitable men, one of whom was a bachelor and the other a married man with many children. Again one can foresee politico-social difficulties. Even if there be well-marked types, we do not want them to become castes or to be thought of as castes.

The rest of the volume consists of a sketchy paper on the origin of religion, by Mr. A. E. Crawley; a chapter in Russian Political History, with its centre of gravity in existing movements, under the title *The Russian Revolution*, by Mr. Wesselitsky; a plea by Professor Geddes for the establishment of Civic Museums, in which he reveals again his well-known faith in collection, tabulation and arrangement, as a means of discovering the laws of nature; sound, practical advice on methods of investigation in economics and political science, by Mrs. Webb; a commendable piece of economic analysis, followed by sane, practical proposals, on the question of the unemployed, by Mr. Beveridge, in the discussion of which Mr. Hobson advanced again his peculiar views as to the want of balance between consumption and production; a somewhat one-sided plea by Mr. Wells that the study and construction of social ideals should form the main work in sociology; and an account of the teaching of sociology in America, by Professor Wenley. In the last paper the little that the Americans have as yet to teach us in sociology, though it is usually a University subject among them and is extensively studied, is laid bare. The subject appears to be as frequently as not taught by rather incompetent persons who have "happened into" it. The great American Universities are as yet only feeling their way.

S. J. Chapman.

*The Approach to Philosophy.* By Ralph Barton Perry, Ph.D., Assistant Professor of Philosophy in Harvard University. London: Longmans, Green & Co., 1905. Pp. xxiv, 443.

The intention of this book is an immense one, but it is well fulfilled. Mr. Perry does not introduce us to philosophy by making his volume a mere history or a mere exposition of systems. It has a life and vigour of its own, because the author is determined that his readers shall understand what the philosophic problem means, even if he has to approach it first from one side, retreat to approach it from a second, and again from a third. Part I. shows how philosophy has its roots in the life known to our familiar experience. Part II. is more technically employed in stating the problem as it is differentiated into questions of metaphysics, logic, epistemology, æsthetics, ethics, theology or

psychology. Part III. expounds the four great recurrent systematic tendencies discoverable in the various solutions offered of the philosophic problem—the systems of naturalism, subjectivism, absolute realism and absolute idealism. The book ends with a recapitulation of results, a statement of the present eclectic position of philosophy with a reference to the modern movements of "personal idealism" and "pragmatism," and a suggestion of Mr. Perry's own views.

The first 'approach' is an easy and popular one, leading through business, poetry, religion and science, to philosophy. The best part of the section is the well-balanced essay on "Poetry and Philosophy". It may be a heresy, but it is rather a happy and illuminating one to sum up Shakespeare as 'universal,' not 'philosophic'—as a poet, not a philosopher-poet—because he "puts no construction upon life" and "there is no Shakespearian point of view". Of more pure philosophic interest, however, is Mr. Perry's contention, in his polemical chapter on "Natural Science and Philosophy," that natural science is not co-extensive with the whole of knowledge because it is abstract, because its conclusions, though they "may be abstractly true of everything, are completely true of nothing". This criticism is the basis of his later rejection of naturalism as a satisfactory philosophy, although Mr. Perry makes it with an evident desire not to spoil, from lack of moderation or acknowledgment, the present *rapprochement* between naturalism and idealism. But moderation is throughout characteristic of the book. It appears in the second section in a warning not to press unduly what are after all only rather convenient abstract distinctions between problems, but to remember that there is no such thing as separate solution of logical, metaphysical or epistemological questions. Each involves the other. This second section, by the way, is the part of the book which suffers most from compression, and might 'have been shorter had it been longer'.

Mr. Perry has, further, made a real effort to reach sympathetically the position of the great system-makers. The result is lucid exposition—no small merit when Absolute realism and Absolute idealism in their historic phases as rival theories of the Absolute have to be stated in concentrated form. These theories are left with their unsolved dilemma exposed to view—the presence of imperfection or evil within perfection as the Good.

Mr. Perry's own position shows strongly the modern determination to do justice to all elements of experience and withstand the attractions of completeness if that is arrived at by abstraction. Criticism has shown, he says, that reality can be construed neither in purely physical nor in purely psychical terms. Nor is it more successful to deduce the whole of experience from an ideal of rational or moral perfection. Error and evil make this impossible. What happens if we abandon the idea of a perfect unity and adopt a pluralistic philosophy? Reality then contains various orders of which the physical, psychical, moral and logical orders are some, and no one of these orders or systems is reducible to another. We seem driven back to some such pluralism after trying and repeating a series of monistic theories. From the moral side it has the merit of justifying endeavour to overcome evil, for evil is allowed to be a reality; from the religious side it makes God a worthy object of worship, because neither morally evil nor indifferent.

The book makes pleasant reading, with a touch of humour breaking through now and then, and the author has an aptitude for coining telling phrases. The appended bibliography should prove valuable to students.

F. H. Melville.

*Proceedings of the Aristotelian Society.* New Series, vol. vii. Containing the papers read before the Society during the Twenty-eighth Session, 1906-1907. London: Williams & Norgate, 1907. Pp. 244.

This annual volume again opens with a paper by the President. Dr. Rashdall's theme is "Nicholas de Ultricuria, a Medieval Precursor of Hume". After noting the advantages possessed by clerical and denied to secular thinkers during the Scholastic era for getting their teaching diffused and their writings preserved and handed down, and the consequent oblivion to which some of the most original thought of the mediæval period of philosophy has been relegated, he takes up the remarkable instance of one such neglected Schoolman. Quoting passages from the works of this thinker and commenting upon their significance, he shows that they go far to anticipate the main theses of Berkeley and of Hume. The Hon. B. Russell contributes a paper "On the Nature of Truth," in which he argues that since the monistic theory of truth—that only the whole truth is wholly true—presents certain difficulties, and especially since there are reasons for rejecting the axiom on which it is based—that relations are always grounded in the natures of their terms—we must adopt another theory; namely, either that those beliefs (or propositions) are true which are beliefs in facts, or that those beliefs are knowledge whose objects are true propositions (such propositions then being facts). In the former case, truth means some sort of correspondence between beliefs and facts; in the latter, no account can be given of what makes a proposition true. Between these alternatives Mr. Russell does not here decide. In a paper "On Causal Explanation" Mr. T. Percy Nunn describes and illustrates different forms of scientific explanation, and gives historical examples of the use and nature of hypotheses. The next contributor is Miss E. E. Constance Jones, whose subject is "Logic and Identity in Difference". Urging the importance for logic of precision in the use of this notion, and premising the distinction between individual or numerical identity and exact resemblance, she shows how various logical processes—assertion, classification, etc.—can be exhibited as forms of unity in difference. Discoursing upon "Humism and Humanism," Mr. F. C. S. Schiller maintains that, while these two types of philosophy resemble each other in being very pronounced empiricisms, and therefore in their common opposition to intellectualism, there are deep-seated differences both of attitude and doctrine between them; and that, indeed, on some most important points, there is a profound antithesis between them and a marked congruity between Hume's scepticism and rationalism. Mr. S. H. Hodgson treats of "Fact, Idea, and Emotion," applying inspection of the actual nature of conscious experience in elucidation of such topics as the meaning of the concept of being, the distinction of knowledge and existence, the concept of matter, the meaning of truth, and the nature of the moral criterion. Dealing with "Intuition"—its place in philosophy and its relation to self-knowledge—Mr. A. T. Shearman urges that a satisfactory system of philosophy must be one based on intuitions which are common to many different thinkers; and contends (agreeing in part with Prof. Stout and in part with Prof. Dawes Hicks) that while sensory contents or intellectual elements are intuited or directly apprehended, feeling, desire and activity are not, and that the subjective self, although known to exist, is not matter of immediate apprehension. The volume closes with a paper on "Philosophy and Education" by Mr. B. Dumville. Pointing out the frequent separation yet necessary interdependence of theory and practice, he sketches the main lines of relation

between philosophy and education in the history of thought, and concludes by urging the pressing need for philosophical directors of education and the application of philosophy to the elucidation of educational problems.

*The Liberal State: A Speculation.* By Thomas Whittaker. London: Watts & Co., 1907. Pp. 202.

In describing this thoughtful volume as a Speculation Mr. Whittaker takes the precaution to inform us that his forecast of the probable future of European political conditions is not a mere prophecy, or an attempt at prophecy. What he has tried to do is to give a sketch of a political ideal going in some respects beyond the existing order, but having its basis in the past, and growing out of the past. The chief title of the book, "The Liberal State," he also tells us does not refer to contemporary party distinctions. By a Liberal State he means a State which accepts the principle of democracy and the principle of intellectual freedom as the permanent elements of an ideal polity. These two principles he considers would now be accepted by both political parties in English life, although they might sometimes differ in their interpretation of them. In Mr. Whittaker's opinion the real opposition to a Liberal State is to be found in a hierarchical or bureaucratic State in which a caste or an order of experts or the representatives of a doctrine govern without systematic popular control.

Mr. Whittaker selects as the starting-point of his speculation the final crystallisation of human society set forth in Comte's positive Polity. Of the three greatest synthetic intellects of the nineteenth century—Hegel, Comte and Spencer—he looks upon Comte as the most antipathetic in appearance to political Liberalism. But in spite of this antipathy to Liberalism Mr. Whittaker considers that Comte has not been of the slightest service to the defenders of the old authoritative order of society. If he will consult one of the late Ferdinand Brunetière's latest books he will find that this statement is a little too unqualified. In a volume published in 1905, entitled *Sur les Chemins de la Croyance*, Brunetière attempts to show how the principles of Positivism can be used for the rehabilitation of mediæval Catholicism. Comte says Brunetière shows that morality cannot constitute itself or justify itself or maintain itself independently of religion; that religion must be based on the affirmation of the supernatural, and finally that Catholicism is the response to these demands. Brunetière it seems to me does not quite prove his case, but he produces a great deal of striking evidence from Comte's writings in favour of it; and in any event Brunetière's work shows that Comte as well as Hegel or Spencer can be used in the interests of the old authoritative order of things. But this is a side issue. It in no way affects the value of Mr. Whittaker's volume which is full of admirable reflexions and sagacious points of view. We agree with him that "Justice and Freedom" are better watchwords than "Order and Progress". It is probable as he points out that the social order of the future will demand a more systematic regulation of industry on the part of the State, and that the State in the future will curtail the possibilities of acquiring social predominance by the accumulation of wealth. Science, philosophy and poetic thought are an admirable source of inspiration for many types of mind, but it is doubtful if they will ultimately supersede religion among the masses of mankind. It is no doubt true that the mediæval formulas in which popular religion now finds expression have largely lost their power. But the religious sentiment must not be confounded with the forms in which it temporarily finds expression. It possesses the power of casting

off antiquated formularies and of re-expressing itself in accordance with the highest and most inspiring ideals of individual and collective life.

W. D. M.

*Lay Sermons and Addresses, Delivered in the Hall of Balliol College, Oxford.* By EDWARD CAIRD, LL.D., D.C.L., late Master. Glasgow: James MacLehose & Sons, 1907. Pp. 312.

During his tenure of the Mastership of Balliol College, Dr. Caird was in the habit of delivering a lay sermon, or address, at the beginning of each academical year; and twelve of these are now published in this volume. Several of them are suggested by current events, such as the death of Queen Victoria; some others are concerned with ethical problems, more or less directly connected with the life of students; but most of them are of a more general character; and it may safely be said that all of them have a certain interest for the student of philosophy, especially for the student of ethics and the philosophy of religion. Perhaps the most important, from this point of view, are the two that come at the end of the volume—on 'Immortality' and on 'The Faith of Job'. The former contains, so far as I am aware, the most definite pronouncement that the author has ever made on that great problem on which so many of our leading philosophical thinkers have lately been expressing opinions. This pronouncement, if less confident than that of some others, is at least pretty decidedly on the affirmative side. The discourse on 'The Faith of Job' puts the author's general religious position in a singularly direct and impressive form. The idea of the organic unity of social, and especially of national, life is strikingly emphasised in several of the other lectures; and they may serve to bring home the idealistic conception of the moral and religious life to many to whom a more esoteric treatment is inaccessible. It is hardly necessary to add that the book is characterised throughout by the ripe wisdom, the lucidity, and the felicity of phrase which have long been familiar to all the pupils and readers of Dr. Caird.

J. S. MACKENZIE.

*Die Kultur der Gegenwart*, I., 6.—*Systematische Philosophie.* Berlin: Teubner, 1907, pp. viii, 432.

This is a volume in a series of encyclopædic range. The volume consists of essays in each of which a writer of established reputation undertakes an appreciation of the achievement and tendency of some phase of the philosophical disciplines in relation to the culture of the time. The word *systematic* is to be taken in the loose sense which it nowadays bears in Germany. Philosophy has abandoned its claim to uniqueness of method and its opposition of validity to fact, in being made to cover psychology.

The essayists are independent one of another. Thus Wundt can characterise with complete detachment the metaphysical significance of Ostwald. The latter and Riehl are at issue as to the value of the law of the economy of thought put forward by Avenarius. Paulsen's *Monopsychismus* is alike alien from the views of Riehl and from the profession of faith with which Dilthey prefers to stop. Yet the spirit of the time has produced some unity of tendency. Negatively, there is among the writers no exponent of the dialectical method, no prophet of the absolute. Positively there is a common conviction that philosophy is essentially metempirical, though whether or how far the stress is on

the first syllable of this adjective might well be in dispute. It is in the main to the *Naturforscher* that they look for the supply of their raw material, and he is accordingly more in honour than the *Fachphilosoph*. A mark of the completeness with which the shifting of emphasis has been effected is to be found in the fact that the article on psychology is the longest in the book.

The general essay on the nature of philosophy with which the volume opens is by Dilthey. His fundamental thesis is an insistence on the phenomena of psychical structure, on conative continuity, or, more nearly in his own phrase, coherent unity of a selective or teleological character, which as objectified in society, in which the individual is concretely realised, finds itself included in a social structure or culture-system with a like coherence and unity of a purposive nature. Any culture-system in its historical evolution must orientate itself towards its environment and endeavour after a *Weltanschauung* of universal validity. Complete satisfaction, however, is unattainable, because the dominant categories obtained at this point in different spheres and from different angles are at once indispensable and irreducible alike to one another and to a common unity beyond them all. Being and End, *e.g.*, refuse to collapse into unity, either by subordination of one to the other or by subsumption under some third. If we decline to mutilate the content, and equally, on the other hand, to sophisticate the form of our thinking, we must regard the prism of the world as never present, in any single view; to the extent of more than one facet completely grasped. Hence the high significance of personality in philosophy. It is the function of the master, as of the great artist, to present us with a lifescape that we have not had heretofore. In a momentary flash from a new angle, as it were, and under a controlled perspective, a subordination or suppression of some categories is rendered to intuition. Such thaumaturgy has no finality. The upshot, it should seem, is sheer relativism. Dilthey's answer is that it is not so, but rather the sovereignty of the spirit over all determinate points of view, conjoined with the conviction of the existence for us of the single reality of the world, under the expressions of its manysidedness in the enduring types of *Weltanschauung* (p. 62).

Enforced with much eloquence and in particular enriched with a discussion of the points of contact and divergence between the philosophical outlook on the one hand, and the religious and again the poetic on the other, the exposition leaves the impression of dignity and of a rare atmosphere. A *Religionsphilosophie* is involved, and a philosophy of art, as represented by poetry. The latter in especial is striking in the nicety of its illustrations and appreciations.

In a list of names marking the stations of objective idealism Heraclitus and Shaftesbury are found with Spinoza and Hegel (p. 58)!

Riehl's subject is Logic and Epistemology. His essay is the shortest in the book and packed full of matter, yet never disproportionate or failing in lucidity. His sense of the essential is so happy that he seems justified both in what he includes and what he omits. He opens with a brief but illuminating treatment of the Aristotelian logic, in which, having disposed of the pretension that the science of the form of science can be dependent on the special science of psychology, he exhibits the syllogism as involving insight into necessity. The phrases in which this is pointed out (p. 78; contrast Ostwald, p. 143), without using other than the stock instance, have almost the effect of originality. But he recognises that as real implication syllogism involved the assumption of the metaphysic of substantial forms, that as pure logic it was open to development along the line of mathematical symbolism and along the

line of a more radical doctrine of predication, and that as method it was not a good instrument of discovery. Accordingly he sets Galilei beside Aristotle as the creator of a new organon. When upon a hint from Plato the author of the *Discorsi* substituted analysis for abstraction and formulated his *metodo risolutivo*, and further advanced upon Plato by applying it experimentally, logic as method rejected the antithesis between deductive and inductive methods and found its one way. 'The sciences separate in virtue of their objects are combined into the unity of science in virtue of their method,' which is not two but one—so Riehl argues against Rickert's demarcation of the historical sciences by their special method. It is probably the not wholly favourable characterisation of the 'algebraic' logic (pp. 80-1, and p. 100, Note 2) that will most interest English readers. 'Speech too is only a symbol of thought, but it is its primary and most intimate symbol, whilst artificial signs are symbols of symbols.' 'What separates the sphere of logic from that of mathematics proper is the concept of number,' and so on.

Riehl's theory of knowledge is of course well known. His protest, however, against the neo-positivist theory of knowledge with its reliance on the concept of 'pure experience' and with its use of the law of parsimony is noteworthy. Pure experience is an ambiguous phrase defined in a circle by Avenarius himself, and as used by him involves an illicit abstraction. The validity of a concept is more than its 'economical' character; it could not indeed be economical if it were not something more. Though the thinker criticised is Avenarius (p. 92 and p. 102, Note 1), Ostwald also is glanced at, who (*infra*, p. 149) says we might just as well employ a saw-toothed line as a straight one for our norm, were it not that the difficulties of calculation or construction would not be balanced by an increased fertility in scientific results. It is Ostwald too who is in question when Riehl observes that, whatever the ultimate formula of Energetics is, it is irrelevant to the determination of the truth or otherwise of Kant's doctrine of the permanence of substance. Riehl's conclusion too is characteristic, to the effect that the principles of our *Erfahrungswissen* are immutable, progress being admissible only in the case of the special experiences dominated by these principles.

Wundt follows with an article on metaphysics. His views on metaphysics having been developed elsewhere, he wisely elects not to repeat himself, and the result is a wise and witty essay, perhaps the brightest in the book. Having formulated and illustrated a law of three stages in the development of metaphysics, the poetic or mythopœic, the dialectic with its bifurcation into speculative idealism and realism severally, and the critical, he determines the stages or positions between stages, with or without a hark back or throw forward, to which the leading teachers of the nineteenth century, and in especial some living writers, belong. Thus von Hartmann is regarded as having relapsed to the first stage, to which Schopenhauer had occasional and even frequent leanings. Hæckel's Riddle of the Universe is also naïvely mythopœic. Ostwald and Mach, despite of their affinities and mutual sympathy, are allotted to the speculative and critical stage severally. Mach is 'an inverted Kant' in respect of his treatment of what Kant calls form and content of sensibility. Wundt is well pleased to find these witnesses from the ranks of original opponents of metaphysics to the inevitability of the metaphysical impulse, and the persistence of types of philosophising. As to originality, *Epigonen sind wir alle*. Wundt closes with some remarks on the future of metaphysics, but, probably through his fear of poaching on Paulsen's preserves, they are disappointingly jejune. The notions of higher reality than that of phenomena and of the possibility of a deduction of phenomena, must be abandoned. Metaphysics

admits of no *progressus* in this sense, only a *regressus*. Wundt's anti-Hegelian convictions do not prevent some wise and sympathetic remarks on Hegel, as on Herbart, whom he equally regards as a spent force.

Ostwald deals with the philosophy of nature. Joying in the uncertainty of logical process, and therefore in the trans-experiential and prophetic character of any scientific ratiocination, he regards all science as empirical and abstract. Its abstractions in its dealings with its empirical material are subjective in their inception, but not arbitrary in virtue of the principle of economy. Beyond the particular sciences there is room for *post-naturalia* of a kind, the most general concepts relative to the sphere of independent things, *i.e.*, to the region from which we receive energy beyond the threshold-value of our sensibility. Here comes in *Energetik*, which further bulks large in Ostwald's classification of the sciences. The classification is admittedly of Comtist inspiration, though the first group in it, that of the logico-mathematical sciences, owes its principle of sequence to the speculations of Peano. The introduction of self-regulation of streams of energy with the biological sciences is evidently a source of trouble to the writer, his older naturalism and newer pragmatism not fully fusing. Ostwald closes with an indication of questions which neither the research of natural science nor philosophy of nature, which seems to differ from *Forschung* only in generality and posteriority, can answer.

The treatment of psychology is in the safe hands of Ebbinghaus. In part he draws upon the published portion of his *Grundzüge*, and the chief interest belongs naturally to the discussions of such subjects as belief, religion and art, which correspond to what he holds still in manuscript. The way in which past experience enriches but controls perception as opposed to sense and bulks still larger in representation, and again in organised thought, has for result a cleavage between subjective conviction and objective correctness. The former dominates the childhood of the individual and the race where the experience is slight and analogy the fruitful source of advance and mistake. We grow subjectively more sceptical, objectively more of realists in the plain man's sense of the word. Among the more persistent beliefs or subjective convictions are certain responses to need, among which the religious faith in help for our ignorance and our weakness amid a hostile environment, in remedies for miseries of growing foresight, to adapt a phrase from Rousseau, is the most prominent. The felt need for help is, through the machinery of animism, based on the phenomena of dream and the like, crystallised in the belief in a world of environing spirits, good and bad, to be conciliated like our fellows good and bad if we but knew how. Cult and the medicine-man emerge. Seeming failure is ideally cancelled by a prorogation of the ultimate issue to the life beyond. The growth of the moral life leads to the moralisation of the spirit-world and the consequent fading of polytheism and nationalism. The growth of knowledge disintegrates the idea of interference. But the future still is dark and the fear of perils which we cannot meet recurrent. The moral god and the god who is only manifest in, if not identical with, the world and its uniform laws, still are objects of faith in which the believers find what they seek, succour against the unknown and fearful, rest to the heart. Art too is a support against the unsatisfying enjoyments that breed satiety and reaction and new desire. Possibly religious in use to begin with, and with its raw materials employed to give greater chances of survival through sexual selection, it is only as chosen for its own sake or as an end satisfaction that it finds its characteristic place in human life. Other characteristic things in Ebbinghaus are his brief appreciations of his predecessors—Herbart, Fechner, and the rest—his

degradation of 'so-called *Phantasie*' to quite minor significance, and again his vigorous maintenance of the thesis that natural causation presents a closed system, in which he makes use of Rubner's experiments as to energy in animal life, and of Atwater's proofs that man is no exception to the rest of the animal world.

Rudolf Eucken writes on the philosophy of history, with some indebtedness to Flint. In his interesting survey of the history of this branch he omits all reference to the Politics of Aristotle, and shows already that it is the time-problem that absorbs him. In order to philosophise happenings in time a point of view is needed from which time is irrelevant. How is this possible? Only, thinks Eucken, if history be the point of contact between the *Dasein* of men as natural beings in the time-order and a *Geistesleben* transcending this time-order. We need a new idealism. The essay is somewhat rhetorical and not always quite clear. It might perhaps be held that the solution as here worked out is only a restatement of the problem.

Paulsen's article on Ethics expounds the antithesis of the teleological ethics of *energeia* to the ethics of duty, and declares for the former. The good or end gets its content in the action of the tribal or social self upon the individual. This relation of individual to society needs grounding in an objective idealism which shall find room within it for the facts of historical evolution. In naming Spencer's Principles of Morality as a work of allied tendency Paulsen is surely a little misleading. Spencer could not admit the objective idealism without which the interrelations of individual and society require a different explanation, and Spencer's hedonism, though finally perhaps 'transfigured,' is of the essence of his view, though to Paulsen it would be repugnant and unpsychological.

Münch discourses adequately of *Pædagogik*. Sitting loose from formulæ, he has been able to touch lightly and suggestively on the main problems and theories in an exceedingly readable essay. His select bibliography is sufficient for the purpose in hand.

Lipps on the subject of Æsthetics presents a complete contrast. Taking the line (as he says, p. 388) that this sketch cannot well be anything but the reproduction of certain fundamental ideas of his larger work, he has been hampered by the limitations of space, and has produced a rather dry summary. His consideration of the exact nature of the subjectivism of æsthetic appreciation is of course of permanent value, and he has some subtle remarks on the nature of a mixed art, such as musical drama, and the relation of its product to the products of the parent arts severally.

To Paulsen finally, who alone contributes two essays, is delegated the task of outlining the problem of the future, and of estimating the tendencies of the present and the solution they make for. He starts from Kant, but dissents from the master's phenomenalism in regard to the inner life, his doctrine of the empirical self. Within us we have a revelation of that which is *per se*, and, through the involvement of the external phenomenon with the psychical reality for which it is, we get an extension of the conviction of reality to the external also, so far as it can be conceived as psychically or spiritually constituted. We reach something that may be called *Monopsychismus*. The *saltus* involved in this form of psychical interpretation of the physical is doubtless the cause of the favour with which Paulsen regards the voluntarist tendency of much contemporary philosophising. His refusal to help himself out by means of an eclectic compromise with vitalism is creditable. That the objectivity of his idealism must be achieved from a subjective and relativist starting-point is again perhaps a ground for his insistence on *Phantasie* as a characteristic of all the great philosophic thinkers,

Spinoza not excepted, nor Kant, at least so far as Architectonic goes. And to a reflective anthropomorphism is consistently assigned the *rôle* of metaphysical method. *Der Anthropomorphismus, wenn man so will, ist die Methode der Metaphysik.* And he goes on: 'apparently no recommendation. It will, however, remain the last word (p. 405).

Truly we may say with Wundt that it is the day of the Epigoni!

HERBERT W. BLUNT.

*Untersuchungen zur Sinnespsychologie.* FRANZ BRENTANO, Leipzig: Duncker und Humboldt, 1907. Pp. 161. M.4.20.

This book consists of lectures delivered before various societies during the last fifteen years by the author, the well-known psychologist and logician. The first held in 1893, and its replica (No. 4, 1905) treat of "phenomenal green," while the second, from the International Congress of 1896, treats of the individuation, multiple quality, and intensity of sensuous phenomena. The third, which will not be discussed further here, works out analogies between vision and hearing.

Is phenomenal green not a mixture of the sensations blue and yellow? Brentano's chief justification of this preliminary question is the fact that painters always call green a mixture of blue and yellow, whereby the objection that they do so because they usually obtain green by mixing yellow and blue pigments, is of no avail, because they obtain green often otherwise and moreover do not claim to see red and green in a grey got by mixing red and green pigments. Brentano develops a new theory of colour vision, in which red, yellow and blue are the fundamental colours from which all others are got by mixture, while each is accompanied by a white component. Complementary phenomena are due to the suppression of the positive colours by the intensity of the white components of each, which reinforce each other. Contrast and after-images are always of such a kind that their colour is the resultant of the mixture of those elementary colours which were not in the stimulus, *e.g.*, stimulus, yellow—after-image, blue-red, *i.e.*, violet. Brentano supports this statement by reference to experiments. He believes that his system enables him with moderate assumptions to overcome difficulties inherent in Henrig's dissimilation-assimilation theory. The facts of colour-blindness lastly are harmonised by the formulation of the law: he who lacks one colour (*e.g.*, red) lacks also the possibility of phenomenal mixture of the two others he still has (*i.e.*, blue and yellow to green) (p. 41). Brentano's theory reinstates Young's elementary colours and justifies Göthe's observations. So much for the theory, which is as good as any other, if it arranges and explains all the facts equally well. It is however evident that the leading motive for Brentano is the fact that the best colour observers (painters) see blue and yellow in green. Green stands naturally in the centre of the discussion, because the theories of colour-vision of both Helmholtz and Henrig look upon green as a simple elementary colour. It is almost taken for granted that orange, for instance, is a "phenomenal" mixture of red and yellow. The difficulties begin of course with the psychological realism which necessarily follows from Brentano's theory, *e.g.*, in the view that from a mixture of blue and yellow white results because the blue and yellow sensations, which are really there, are overweighted by the double dose of white sensation and are only noticeable as a faint green. We see green, *i.e.*, blue and yellow together, in the spectrum, because blue and yellow sensations are here excited with at least only one white component and are therefore visible. This theory leads naturally to the

further realistic theory, that the intensity of sensation is to be conceived as its degree of density and to the statement that in any very weak colour all five colours, black, white, red, yellow and blue, are all present together. It is perhaps better not to be too confident about such observations. In any case the painter's observation has no right to decide between the views that green is a phenomenal mixture of yellow and blue, and that green is *like* blue and *like* yellow, any more than it has in the case of orange. It is the more reserved attitude willingly to recognise the resemblances between colours and the agreement between these resemblances and the more likely physiological theories of colour-vision and to be very chary about building a psychological theory of colour-vision on the one or the other. These physiological theories of colour-vision, resting, as they do, entirely on equations of colour-mixture, negative instances, such as colour-blindness and other equally objective observations, do not involve or support a psychological theory of colour-vision of a realistic kind at all.

Essay II. develops the thesis already mentioned that intensity of sensation is to be explained as greater density of sensation particles. Sensations are of different quality and are individualised and localised by their place in a sensation-space, as times in a time-space. They are impenetrable the one to the other, and they can be present in greater or less density while differences in such density and in quality cannot be perceived under a certain degree. Suppose two kinds of sensation-elements mixed together, so that the distance of the elements from one another is below the threshold of perception, then the result in a massive sensation will be a multiplicity of distinguishable, but inseparable qualities. This is exemplified in sensations of sight and hearing, *e.g.*, green = blue + yellow sensation particles ; dark green = green particles of low density with black sensation particles in the spaces ; so tone-fusion. The psychic world is in every way analogous to the physical world, though the latter as against Wundt, is not dispensable. Surely the answer to all this is the very argument Brentano uses in the first and fourth essays, namely, that direct introspection reveals in the localisation of sensations something more than a sensation of a certain quality in a certain position in a sensation world. The localisation of sensations is itself an experienced fact in quite another manner to the difference in experience, if any, which results from two otherwise similar experiences happening merely at different times. Similarly, the character of intensity is a matter of direct experience, which, though possibly explicable by a theory of the density of psychological elements of a realistic nature, is not removed by such a theory. It is easier to assent to these introspective facts than to work out the exceedingly complex implications of Brentano's theory. Brentano says his theory explains why there is an upper and a lower limit to intensity, namely, because the elements won't be compressed beyond a certain point, but surely there is no more trouble in accepting the fact of lower and upper limits of intensity, than in accepting, as Brentano does, the fact of a threshold of perception for degrees of density.

H. T. Watt.

*Die Elemente der Erziehungs- und Unterrichtslehre. Auf Grund der Psychologie der Gegenwart. Dargestellt von Dr. Paul Barth, a.o. Professor an der Universität zu Leipzig.* Leipzig: 1906. Verlag von Johann Ambrosius Barth. Pp. xi, 515. M. 7.20.

This treatise is an attempt to deal with the science of Education in the light of the most recent advances in Psychology and Sociology. It

deals with theory, and is especially concerned with the practical side of instruction. It refuses to adapt itself to special grades of schools or instructors, and regards the work of education as the same in principle in all grades. The first part of the work considers Education and Instruction in general, dealing with the formation of will and feeling. Under the heading of the formation of the mind, the author treats of Anschauung, Attention, Judgments, formation of Concepts, "Systembildung". The Lehr-plan and Lehr-gang are discussed. On the practical side every subject of the school curriculum is carefully considered, and its rationale determined. The work consists of over 500 large octavo pages, and its especial feature is the wide reading of the latest and best writers worthy of consideration, which the author has undertaken before forming his conclusions. It is a book which may fairly be offered to the educational sceptic, to show that there is 'something' to occupy the mind of a student in this new 'science of education'. Education can claim to be a 'learned' profession, not only in the academic subjects which the teacher must know, like every other student, but also in the very ground-work of his profession. In Dr. Barth's book the subject *looms* as learned as, say, a book on the theory of law. Moreover, Dr. Barth is in the vanguard of educational thought. In considering the aim of education, he criticises the suggestions of Herbart and Basedow, but prefers the view of Schleiermacher, that education has for aim the cultivation of fitness for the life of the community. Education, in Dr. Barth's view, has grown out of the idea of the social life. If education is to prepare the pupil for the life of human intercourse, it must be by regarding the individual as a social unit. Society is earlier than the individual, *in the logical sense of the term*. The sociological basis has worked enormous results in jurisprudence. It will probably effect great modifications in the theory of education, possibly requiring considerable reconsideration, say, from the Herbartians. There is no doubt, as, indeed, Dr. Barth perceives, that the historical element will play a greater part in the theory of education than it has hitherto done, possibly with as much fruit as in the province of political economy. It is to be wished that Dr. Barth had treated the historico-sociological aspect of education in greater detail. The present-day scientific theories, as Dr. Barth points out, may modify all our old theories of education, especially the old views of the influence of heredity, on the formation of character. The factor of 'Variation' came from the physical side; now from the psychical side comes 'Suggestion'. The whole tendency of modern science, therefore, seems to point to a great hopefulness in dealing with the most conservative factors of human nature, *e.g.*, dispositions, inclinations, 'instincts,' as susceptible of more ready modifications than were supposed. Baldwin is probably right, says Dr. Barth, when he says: "Suggestion is just as much an original and motor impulse as pleasure and pain".

Dr. Barth in one passage shows the bearing of his general sociological view on the Curriculum. He says: "A complete statement of the theory of education and of instruction would enter into the details of the present condition of the organisation of educational institutions, would treat of their gradation, their dependence on the State and on society, their essential spirit and their external regulations. And not less desirable would be (in accordance with the direction which the author wishes should be given to the whole work of education) an acquiescent or rejecting judgment on them. But such a criticism could only be built upon a thorough, historical survey of the development of education, which would here presume especially the correlation of education with the changes in society. This cannot be enclosed within the compass of this

volume." Dr. Barth intends to make such an exposition and also criticism, in a later book. We can only hope that Dr. Barth will be able to execute this task. It would not only be an extremely interesting undertaking, but would exhibit in a concrete form the significance of the alliance of education with sociology. The tendency of some important educationists at the present day to suppose that a theory of education is virtually independent of a study of its history, is purely *doctrinaire*. Dr. Barth's proposed work would do much to bring Educational Theory into line with the inquiries which have produced the best recent results in the study of Jurisprudence and Economics.

FOSTER WATSON.

*Fortschritte der Kinderseelenkunde.* By WILHELM AMENT, Ph.D. Leipzic: Engelmann. Pp. 76.
*Nervenkrankheit und Lektüre.* By Prof. H. OPPENHEIM. Berlin: Karger. Pp. 120.
*The Psychology of Child Development.* By IRVING KING, Chicago. London: Fisher Unwin. Pp. 265.

These little books all deal with the problems of Child Study. In the first Dr. Ament, in remarkably brief space, classifies and summarises the manifold contributions to this subject which were made between the years 1895-1903. He has thus provided students with a guide-book and bibliography which should be of no little value in view of the bewildering multiplicity of articles bearing upon the nature and development of the child. Dr. Ament has not included in his guide-book any sufficient account of what has been done by medical men in the way of correlating the physical and psychical features of children's growth. That this side of child study is worthy of attention is shown by the three valuable essays of Prof. Oppenheim, whose observations on the nervous condition of children at different ages are of the greatest practical value.

Mr. King's *Psychology of Child Development* aims at presenting a consistent and intelligible outline of the mental development of the child from the standpoint of mental function. The point which he specially emphasises is that "there is a psychology of the child-mind that is essentially different from that of maturity, simply because it is not legitimate to discuss mental powers and contents in and of themselves, but only with reference to their setting in experience, and further because in children we have a different sort of an experience from that possessed by the adult".

Prof. Dewey has written an introduction in which he approves of the method of the author. The book, however, claims more originality than it seems to possess.

JOHN EDGAR.

*Die Beeinflussung der Sinnesfunctionen durch geringe Alkoholmengen.* I. Teil. WILHELM SPECHT. Leipzig: Engelmann, 1907. Pp. 115. M. 1.60.

This careful and interesting piece of work is the first of a series of papers by the author on the effect of alcohol on psychical processes. He departs from the methods used by Kraepelin in favour of an examination of the absolute threshold and the difference threshold for sound, and obtains good results, although his review of the work of Kraepelin and his pupils is not always quite just. It is at least not obvious that Wundt's views on apperception and association are so very precise and sufficient, that a short statement of them should discount Kraepelin's

method of association experiments and his statement of his results. Besides, the work on memory has shown that a seemingly elementary process, as is for instance present in the determination of the difference threshold, is not necessarily a more favourable instrument for obtaining results of a certain kind, than a seemingly more complex one. Specht found that the difference threshold rises and the absolute threshold falls under the influence of alcohol (40, 20, 10 c.c.). Different degrees of poisoning show themselves in the varying tendency of the observer to be dominated by the intensity of the last perceived stimulus, a weak second stimulus seeming more intense than a preceding louder one. This the author shows to be due probably to the lapse under alcohol of the ability to compare sensations. The momentary sensation then becomes more penetrating to the observer, so that the absolute threshold falls, and the difference threshold rises. The results obtained in this paper are clear and seem thoroughly reliable.

H. J. W.

*Problemi della Scienza.* By Federigo Enriques. Bologna: Zanichelli, 1906. Pp. iv, 593.

This work forms probably the most thorough and comprehensive study that has appeared in recent years of the concepts on which modern science is built. Included in its scope are a general discussion of the possibility, aims and limits of Science, and a detailed treatment of the special problems of Logic, Geometry, Mechanics, Physics and Biology. It is written with a profound knowledge of the history and modern developments of Science, and with a critical grasp of the trend of philosophical thought and of the underlying psychological questions, such as are rarely found united in one mind. Certainly the work should contribute in no small degree towards the end which its author desires to have realised—that of a scientific education by which the labourer in every special field may understand how the subject of his own research is subordinated to the more general problems.

The aim of the volume is what is called a Positive Gnoseology (p. 70), the first problem of which is to determine the criteria implied in our conception of objective reality, as opposed to illusion and error of the senses; but it has to deal also with the technique of observation and experiment, the nature of mental elaboration, the validity of concepts, etc. Thus, while Logic shows the *ideal* method of procedure in scientific construction, the method of *proof*, Gnoseology will show the *real* methods, the methods of *discovery*. It is a direct critical examination of Science, regarded as itself the fact to be explained.

Reality means, according to Enriques, the correspondence of sensations with expectation; a real existing by itself, independently of our experience, is simply an absurdity. His criticism of this conception, as of those of an object-in-itself, a subject-in-itself, an absolute-in-itself, and his insistence on the essential relativity of the distinctions from which they arise, are both novel and interesting. On the other hand, he recognises to a greater extent than most "positive" critics the function of imagery and hypotheses in the progress of science, as ideas directive of experience and research. Indeed he shows that much that passes for objective knowledge, for example the mechanical view of nature, is inherently imagery or subjective "modelling". Throughout the work it is argued that the fundamental logical processes, in the building and development of concepts, are really psychological, *i.e.*, the processes of association and dissociation, under the regulation of the will. For example, "*to think an object* is to determine it precisely, to

distinguish it as recognisable, *i.e.*, to inhibit the course of those unconscious associations that would tend to modify its image". This is the small modicum of validity allowed to the principles of Substance, Cause, Energy, of the "Higher Logic".

"Successive Approximations" is the keynote of Enriques' conception of scientific knowledge. Metaphysics itself is held to be subject to the same law, otherwise known as the law of "Least Effort"—"that new associations, representing causal relations, tend to effect themselves along the associative tracts already laid down by other habitual processes" (p. 259).

These principles, as has been said, are applied in the second part of the work to the special sciences of Geometry, Mechanics, Physics and Biology. The net result of a really brilliant analysis is to show that the law of universal mechanism, the ground-assumption of the physical sciences, is itself, as usually expressed, a transcendent conception which must be set aside. In Physics it is possible to retain the spirit of this universal mechanism and of the determinism it implies. In Biology, on the other hand, the teleological remains a distinct and valid principle of judgment alongside of—but not in conflict with—the mechanical. The teleological explanation expresses a first degree of knowledge, the inference from effect to cause; it may give place at any time to the more perfect type of explanation—the mechanical, that from cause to effect. But while there is no contradiction between the teleological and the mechanical explanations of the phenomena of life, on the other hand—and this is the conclusion of the work—the mechanical hypothesis may be regarded as both indifferent and irrelevant to the progress of Biology. The cases with which the latter has to deal are so infinitely complex, and therefore so many *complementary* hypotheses become necessary, that the mechanical one (with which we start) almost or wholly disappears.

J. L. M.

*Le Base dell' Umanismo.* By P. R. Troiano. Turin, Rome, Milan: Fratelli Bocca, 1907. Pp. 244.

Prof. Troiano, who teaches moral philosophy in the University of Turin, has attempted in this very lucid and interesting volume to sketch the outlines of a 'critical humanism' or 'humanistic spiritualism,' of which he considers successively the epistemology, the theory of value and the religious applications. The vigour, common sense and common honesty of his polemic against absolutism plainly show that genuine and thorough-going humanism has taken firm root in Italy, where apparently absolutism is either not so powerful or not so fanatical as elsewhere. It would sometimes seem, however, that the most exact equivalent of Prof. Troiano's 'humanism' would be what in British Philosophy has (inadequately enough) been called 'personal idealism'. For, though he often argues pragmatically (*e.g.*, pp. 63, 187, 202), and there can be no question of his decided anti-intellectualism, the relations he conceives to exist between what he calls 'pragmatism' and his own 'humanism' are not conceived quite as a British 'humanist' would conceive them. Thus he distinguishes (pp. 14-15) humanism from pragmatism, and holds that the latter tends to confound the conceptions of being and value, truth and utility, and to restrict the field of scientific research. From other passages, however, it would seem that the ground of this discrepancy is twofold, and neither serious nor tenable. In the first place, Prof. Troiano appears to construe 'pragmatism' rather too narrowly, as mean-

ing chiefly 'fideism,' *i.e.*, its application to religion (*cf.* pp. 73, 197). Secondly, his logical objection to a completely pragmatic view of truth seems to be due to his having (quite unnecessarily) retained too much of the old phraseology about the fundamental distinction of 'theory' and 'practice,' 'fact' and 'value'. But that these antitheses are fallacious and untenable appears at once when the question is raised as to what except 'practical' consequences enables us to distinguish between 'true' and 'false' theory, and what but its 'value' leads to the recognition of 'fact'. In other words, the antitheses between the true, the useful and the valuable break down so soon as they are taken dynamically as the products of a cognitive process. That this should have escaped so good a humanist as Prof. Troiano, is the more surprising that he sees clearly how impossible it is to separate the three functions of valuing, acting and contemplating (p. 57), and actually declares (p. 93 that "the true is that which has value for the intellect and is the good thereof". But as against the abstractions, mutilations and misrepresentations of the traditional intellectualism, Prof. Troiano is a strenuous champion of the unity and integrity of the human spirit.

F. C. S. Schiller.

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# VIII.—PHILOSOPHICAL PERIODICALS.

PHILOSOPHICAL REVIEW. Vol. xvi., No. 3. **O. Ewald.** 'Contemporary Philosophy in Germany, 1906.' [Metaphysics and epistemology show a return to post-Kantian idealism. First comes neo-Kantianism, which has lost nothing of its inner force and external efficacy by being compared with the more extreme idealistic systems. Then comes neo-Fichteanism; and then the philosophy of the Unconscious in close relationship with Schelling's system, and neo-Hegelianism. All three are in principle concerned with the application of the categories, the first and third by way of a unitary logical method, the second by way of a unitary ontological method. The new Fries school fixes its attention upon the status in consciousness of the subjectively given, and thus mediates in peculiar fashion between phenomenology and psychology. In ethics and aesthetics, Nietzsche's influence is being forced into the background by the neo-romantic movement which has gone forth under Schelling's banner.] **E. B. McGilvary.** 'Pure Experience and Reality.' [A criticism of Dewey's *Reality as Experience*. It is one thing to say, No experience: no reality, and it is another thing to say, No contemporaneous experience: no reality. On Dewey's view, knowledge of the past becomes a self-contradictory thing. Just as Hamilton's school, having convinced themselves that some of our knowledge is representative, allowed themselves to infer that all knowledge is of that kind; so do philosophers of Dewey's school, having convinced themselves that some of our knowledge is not representative, and that if all of it were we should have no criterion of truth, jump to the conclusion that no knowledge is representative. In truth, our knowledge is partially intuitive and partially representative, and acceptance of this fact makes possible a meaning of transsubjective reference which accords with observation and does not involve contradictions.] **G. H. Sabine.** 'The Material of Thought.' [Criticises, with special reference to Rickert, the current logical error that there are two generically different kinds of knowledge and experience, the categorical knowledge of particular individuals and the hypothetical knowledge of universal explanation. This distinction is really the old one between matter and form. Real experience is always an interpenetration of categorical reference and hypothetical relation: and the problem of thought is the elimination of inconsistency and the extension of rationality within the all-inclusive judgment which supports experience.] **B. C. Ewer.** 'Determinism and Indeterminism in Motives.' [Determinism has been based, intellectually, upon introspective report of the motives to individual decision and upon the universality of the causal principle. While, however, introspection tells me that I am compelled to do something appropriate to the situation, just what that shall be I freely choose. And while we hold to the concept of uniformity throughout nature, we need not abandon indeterminism in human choice.] Reviews of Books. Notices of New Books. Summaries of Articles. Notes.

PSYCHOLOGICAL REVIEW. Vol. xiv., No. 3. **H. Carr.** 'The Pendular Whiplash Illusion of Motion.' [Dodge has contended that his pendulum test (in which two lights of weak intensity are placed on the two arms of a counterbalanced pendulum, and the one of them is followed by the eye while the other is peripherally perceived) offers ideal conditions for judgment of the theory that eye movements contribute to the visual perception of motion, and further that the outcome of the test is strictly negative. Repeated experiments show, however, that the observed phenomena cannot be interpreted in Dodge's way, but are due mainly to the receding positive after-image. Logically, then—although this conclusion is offered with reserve—the test shows that eye movements do function in the perception of motion.] **J. M. Baldwin.** 'Thought and Language.' [A survey of the motives which lead to the determination of thought in a system brings us finally to the consideration of its linguistic character. The question whether thought is possible without speech has been answered, from the side of language, by the personal or dynamic and by the social or static theories: the line of solution lies in the distinction between meaning as singular and in some sense private, and meaning as general and universal. Thought becomes a linguistic mode, because the two great characters of logical meaning actually require this: language is the instrument of social habit, conserving and storing up as a social heritage the gains of common meaning; in speech, the function by which the content of language is actively rendered and interpreted, the accommodation side of thinking is given its chance. The validity of a thought-content may be tested by appeal either to the socially established context of common meanings or to individual judgment. The units in which items of meaning are cast for both modes of confirmation are predications or predicative meanings, which may be classified as elucidations and proposals. All elucidation, all predication that is really judgmental, develops with constant reference to proposals to which it is the reply and elucidation; all instrumental reference of knowledge requires a basis of established judgmental content whose adequate theoretical elucidation it presupposes. The reason is that knowledge is common property, that individual judgment presupposes universal acceptance, and that truth is fitted always to stir up curiosity and practical impulse as well as to satisfy theoretical interest. Language thus shows the concurrence of the two points of view from which the development of thought may be observed. As personal and social vehicle of thought, it testifies to the falsity of any individualistic theory.] **C. L. Herrick.** 'The Nature of the Soul and the Possibility of a Psycho-Mechanic.' [The energist regards the phenomena of the physical universe as manifestations of a single energy; the psychologist asserts that all mental states are acts. Since these two sorts of activities interact, body and mind are phases of one reality, an activity. The psychical differs from the physical only as the result of a logical analysis, made possible by our limitation. So arises the possibility of a psycho-mechanic. The sum of the equilibrated activities in the body forms its vital continuum, and one phase of the equilibrated continuum is the activity of consciousness.]

JOURNAL OF PHILOSOPHY, PSYCHOLOGY AND SCIENTIFIC METHODS. iv., 10. **J. Dewey.** 'The Control of Ideas by Facts'—II. [Explains that fact becomes a logical problem only when there is a question of altering presentations. "It ought to be axiomatic in logic that the reality concerned in any intellectual situation, in so far as intellectual, is not true and good reality in a final objective sense, but is a sign with respect to it, a sign whose significance still requires to be made out, and whose value is in the value of the consequences to which it may direct one."]

**B. H. Bode.** 'Realism and Objectivity.' [A protest against a 'panobjectivism' which verbally extends the term 'object' to emotions and volitions, and equates it with 'experience,' thereby rendering 'error' impossible and relapsing into subjectivism.] **J. H. Tufts.** 'Garman as a Teacher.' [A late professor at Amherst College.] iv., 11. **J. E. Boodin.** 'The Ultimate Attributes of Reality' ["Taking reality at its face value as a stream of processes . . . it takes at least four dimensions, or independent variables to define it: stuff or energy, which furnishes us with our various types of uniformity or expectancy, whether physical or psychological: time, which looked at objectively accounts for rearrangement or passing, looked at subjectively accounts for the instability of our judgments and values: space . . . and direction. . . ."] **W. James** and **J. E. Russell.** 'Controversy about Truth.' [An interesting correspondence provoked by James's article in iv. 6. James notes "with extreme pleasure your explicit confession that 'truth' in the intellectualist sense cannot be further defined," and urges that "if 'true' be not an abstract name for the property of verifiability in an idea, then an idea might conceivably be true though absolutely unverifiable". Russell admits this, with a reservation in favour of Royce's Absolute. James concludes thence that "the word truth might on certain occasions have no meaning whatever".] iv., 12. **J. Dewey.** 'The Control of Ideas by Facts'—III. [A closely-reasoned and valuable account of how the ideal anticipation of a satisfactory reality is used to modify the discordant brute obstacles given as the initial 'fact'. Hence the 'idea' and the 'fact' are *in pari materia* throughout and their 'agreement' presents no such difficulty as it does on the intellectualist theory. Both are tentative and experimental and continuously revalued.] **J. B. Pratt.** 'Truth and Its Verification.' [Argues that verifiability is essentially the intellectualist, and verification essentially the pragmatist, conception of truth, and that it is inconsistent for pragmatists now to begin speaking of verifiability.] **E. L. Thorndike.** 'On the Function of Visual Images.' [There is not experimentally any demonstrable difference between good and bad visualisers in the accuracy of their memories of visual objects.] Contains also a long review of Schiller's *Studies in Humanism* by A. K. Rogers. iv., 13. **T. P. Bailey.** 'Snap Shot of a Hunt for a Lost Name.' [A study in introspection.] **A. E. Davies.** 'Suggestions toward a Psychogenetic Theory of Mind.' ["Ideas have their psychogenetic origin in the fact that it is important not only to know what and where things are, but what things may be expected to do." They "are instruments for the control of society".] iv., 14. **R. B. Perry.** 'A Review of Pragmatism as a Theory of Knowledge.' [Exhibits a large measure of assent, but insists that though truth must be satisfactory the 'satisfaction-element' is not to be identified with the 'truth-element' as regards which truth must 'envisage reality'.] **W. P. Montague.** 'Contemporary Realism and the Problems of Perception.' [Defends against Bode (in iv., 10) an (epistemologically) 'monistic' realism which omits the system of minds and ideas which mirrors reality. Admits that he has not solved the difficulty about the impossibility of error on 'panobjectivist' principles, but thinks no other theory has, and meanwhile makes three postulates, (1) the emission of an influence from a physical object in space, (2) its reception as a stimulus by a living organism, and its transformation into sensation, and (3) a perceived object located in the outside space. Even though this account seems "fanciful and crudely materialistic," there are yet no other theories which "do not lead either to the paradoxes of subjective idealism or to the still greater paradoxes of psychophysical dualism and parallelism".] iv., 15. **W. Fite.** 'The Exaggeration of the Social.' [Shows that the objectivity of our cognitive and moral categories could be developed also out of our interactions

with a non-social environment and that it is a 'sociologist's fallacy' to conceive what is not 'individual' as necessarily 'social,' and concludes that the social category "as the basis of a scientific classification has no validity whatever".]

Revue de Métaphysique et de Morale. 15e année. No. 3. Mai, 1907. **E. Borel.** 'La Logique et l'intuition en mathématiques.' [The study of mathematics distinct from that of its principles. Mathematics a natural science in which Logic plays no greater part than in the other natural sciences. The strengthening of the logical faculties not the only object of mathematical education: it ought also (*e.g.*, in Geometry) to aim at strengthening the power of intuition.] **V. Boy.** 'La Vision.' [The property of projecting sensation fundamental, due to the tactile nature of the eye and its geometrical disposition. A dynamic difference in retinal impressions representing the withdrawal of the point of irradiation translated into sensations of spatial appearance.] **L. Weber.** 'La Morale d'Épictète et les besoins présents de l'enseignement moral' (suite). **A. Leon.** 'La notion du réel.' [Our notion of reality, both as regards content and degree, is transformed with our knowledge, and varies according to our culture. There are diverse systems of knowledge and its organisation goes on round several centres at the same time. Systematisation of knowledge analogous to that of perception. Our selection determined by practical interest and the principle of least effort.] Études Critiques: **P. Boutroux.** '*La théorie physique* de M. Duhem et les mathématiques.' Questions Pratiques: **J. Wilbois.** 'La pensée catholique en France au commencement du xxe siècle.' No. 4. Juillet, 1907. **B. Jacob.** 'Le matérialisme historique.' [It is epiphenomenalism applied to social life. It is an unwarrantable simplification and suppression of facts. Socialism as much unjustified in making material interests at least the *principal* springs of action.] **F. Mallieux.** 'La méthode des juriconsultes' (à suivre.) [Discussion of the merits of two theories: that which presents the law as virtually complete, and deduces from this postulate that whatever is not provided for is illegal; and that which presents the law as essentially incomplete and invites us to gather many unexpressed consequences from a consideration of its principles.] **E. Le Roy.** 'Comment se pose le problème de Dieu' (suite de fin). [Proceeds to the affirmation of God. That which resists critical dissolution and has inexhaustible and durable fecundity is real. Such is the idea of God. His affirmation that of the moral order. God is for us a centre of duties, and we ought to regard Him as a subject of rights, a person. Conclusions based on M. Bergson's *Évolution Créatrice*.] Discussions: **G. Lachalas.** 'Sur un détail des travaux de M. Claparède concernant le témoignage.' **Ed. Claparède.** 'La capacité de bon témoignage.' Questions Pratiques. **J. Wilbois.** 'La pensée catholique, etc.' (suite et fin).

Revue Néo-Scolastique. Août, 1907. **C. Besse.** 'A Defence of Intellectualism.' [Against Modernism or Pragmatism.] **J. Halleux.** 'Proofs of the Existence of God.' [Argument for Theistic Causation against Monism.] **S. Deploige.** 'The Conflict of Moral Science with Sociology.' [A discussion of M. Durkheim. Is there such a thing as a Collective Consciousness?] **J. Gredt.** 'Homogeneity or Heterogeneity of a Chemical Compound.'

Revue de Philosophie. 1er Septembre, 1907. **P. Duhem.** 'Absolute and Relative Movement.' [A fragment of a work to be published on the formation of the Copernican system.] **E. Hérilier.** 'Personal-

ity.' [Personality is *being yourself*: it is the fulness of liberty and self-determination: it is being something else than a product of hereditary vices and bad education: it is the having learnt to *will*, which we have to learn, as we learn to swim, by effort. This article well deserves the attention of any one interested in education, or in the free-will question.] **J. Baylac.** 'Two Recent Systems of Morals.' [They are named Solidarity and Sociology. There is no essential difference between them, and both lie open to the same objection, that mere experience of fact can never erect a moral ideal.] 1er Octobre, 1907. **J. Gardair.** 'The Infinity of God.' ["While proclaiming God eminently actual and perfect, without possibility in Himself of interminable development, we must recognise in Him the Sovereign principle of an interminable multiplication of possible realities, and thus are conciliated in God the two senses of the word *infinite*."] **A. Joussain.** 'The Genesis of the Notion of Right in the Individual Soul.' **P. Duhem.** 'Absolute and Relative Movement.' [Theories of post-Aristotelian Greek philosophers about place.] **F. Warrain.** 'An Attempt at Philosophic Synthesis.' [Analysis of an ambitious and elaborate work by H. Lagresille, *Le Monde Psychique*.] **P. Fontana.** 'M. Bergson's Course at the College of France.' [On the process of Deliberation.] Reviews of **E. B. Bax**, 'The Roots of Reality,' and **A. W. Benn**, 'The History of English Rationalism in the Nineteenth Century.'

Archives de Psychologie. Tome vi., No. 4. **E. Claparède.** 'Le laboratoire de psychologie de l'université de Genève, 1897-1907.' [Report of equipment, courses, publications, etc.] **O. Decroly** et **J. Degand.** 'Contribution à la pédagogie de la lecture et de l'écriture: comment un enfant sourd-muet apprit à lire et à écrire par la méthode naturelle.' [Report of primary education of a child of five and a half, by the method of phrases; comparison with results obtained by the letter and word methods.] **A. Maeder.** 'Essai d'interprétation de quelques rêves.' [The paper opens with a sketch of Freud's theory, and proceeds to apply it to the analysis of four dreams. The outcome is interesting, but not wholly convincing. There can, however, be no doubt that the method is fruitful and merits thorough test.] **K. Buehler.** 'Remarques sur les problèmes de la psychologie de la pensée.' [A criticism of Messer's Untersuchungen über das Denken, which comes, like the original, from the Würzburg laboratory. The writer's main point is that Messer paid too much attention to logical schemas, and too little to the direct introspective reports of his observers. Hints are given of the critic's own psychology of relations.] Recueil de faits: documents et discussions. **H. Besson** et **T. Flournoy.** 'Note sur quelques phénomènes de "possession" en Kabylie.' [Brief report of cases, and suggestion of an explanation by the conflict of the new faith with old habits of thought.] **M. C. Schuyten.** 'Note pédagogique sur le dessin des enfants.' [Critique of methods of teaching drawing; examples of gifted children who are missed by school instruction.] Bibliographie. Notes diverses.

L'Année Psychologique, publiée par A. Binet. 13th year. Paris, Masson et Cie., 1907. 15 fr.

In contrast to the previous numbers of *L'Année*, this volume contains almost only articles by well-known writers summarising critically the work done in the last few years on various problems, or presenting one view of a special problem in the light of present knowledge. The papers are all very clear and good, and as it is impossible to give any intelligent summary of such a mass of views and subjects in a few words, it would

be unjust to give special prominence to one or two. In many cases the names of the authors will be sufficient guarantee of the value of their essays, while in many others the promise of a summary account of work done on the problem named on the title of the paper will attract all those interested in the problem. It seems that summaries and critical reviews are much in vogue in psychology at present. It was certainly very necessary to have many of these in order to overcome the onesidedness and personal character of the text-book, and to have all the views and work on a special problem gathered together by a competent hand. That this can be done is a sign that psychology is outgrowing its fragmentary stage and is becoming an ordered system of knowledge carrying conviction with it. M. Binet is certainly to be heartily congratulated on the selection of authors and problems he has made. They are as follows:—

**H. Poincaré**. 'La relativité de l'espace.' **Foucault**. 'Les progrès de la psychophysique.' **Souriau**. 'La perception des faits psychiques.' **F. Plateau**. 'Les insectes et la couleur des fleurs.' **G. Zeliony**. 'Les travaux de Pawlow sur la sécrétion de la salive psychique.' **Ley**. 'Le médecin et le pédagogue.' **Maxwell**. 'Psychologie et Métapsychique.' **Van Biervliet**. 'Le toucher et le sens musculaire.' **Decroly** et **Degand**. 'Mémoire visuelle des anormaux.' **Bourdon**. 'Sens articulaire ou musculaire?' **H. Piéron**. 'Grandeur et décadence des Rayons N.' **G. Bohn**. 'L'acquisition des habitudes chez les animaux.' **Crépieux Jamin**. 'L'expertise en écriture et l'affaire Dreyfus.' **E. Maigre**. 'La nature et la genèse des instincts, d'après Weismann.' **Imbert**. 'L'étude scientifique et expérimentale du travail professionel.' **R. Masselon**. 'L'affaiblissement intellectuel dans la démence précoce, la démence sénile et la paralysie générale.' **Régis** et **Laurès**. 'La confusion mentale chronique.' **Deniker**. 'La question des races en psychologie.' **L. Fredericq**. 'Les conditions physico-chimiques du fonctionnement des centres nerveux.' **Chabot**. 'La coopération de l'école et la famille.' **Bernheim**. 'L'évolution du problème des aphasies.' **Wertheimer**. 'La douleur et les nerfs dolorifiques.' **Van Gehuchten**. 'Les voies sensitives du système nerveux.' **G. Bonnier**. 'La double individualité du végétal.' **Cantecor**. 'Les doctrines modernes de la morale.' **Larguier des Baucels**. 'L'étude expérimentale de l'intelligence et de la volonté.'

ZEITSCHRIFT FÜR PHILOSOPHIE UND PHILOSOPHISCHE KRITIK. Bd. CXXX., Heft 2, 1907. **Paul Sickel**. 'Das Verhältnis des Pantheismus zum Theismus in Lotzes Lehre vom Absoluten.' [As a metaphysician Lotze endeavoured to construct a philosophical system on monistic lines. As a religious believer, he held fast to the doctrine of a personal God. His life was spent in unavailing attempts to reconcile the pantheistic with the theistic point of view.] **Otto von der Pfortden**. 'Der Erkenntniswerth der chemischen Synthese.' [The modern theory of chemical synthesis enables us to predict with certainty the number and nature of compounds into which certain specified elements can enter. From this the writer infers that the bodies in question have an objective existence independent of our minds.] **R. Manno**. 'Zur Verteidigung der Möglichkeit des freien Willens.' [The conservation of energy is not an *a priori* law of thought but an empirical generalisation, not necessarily extending beyond the inorganic world. It cannot therefore be urged in disproof of freewill.] **Otto Siebert**. 'Die Erneuerung der Friessischen Schule.' [Contemporary admirers of Fries may not succeed in persuading the world of the superiority of his philosophy to all others. But they have shown that as an interpreter of Kant his

position has been seriously misunderstood by modern historians of philosophy with Kuno Fischer at their head.] **Kristian B. R. Aars.** 'Der freie Wille. Eine Frage an Herrn G. Noth.' [Determinism teaches that in like circumstances like events happen. Does Noth believe this, or does he not?] **Richard Falckenberg.** 'Eine Textverwirrung in Leibniz, *Nouveaux Essais* bei Gerhardt.' [In Gerhardt's edition of Leibniz, vol. v., by a serious dislocation of the text, a long passage of the *Nouveaux Essais* which should occur on page 79 has been removed to pp. 69-72.]

Zeitschrift für Psychologie. Bd. xlv. Heft 2 (cont.) **W. Jacobs.** 'Über das Lernen mit ausserer Lokalisation, I.' [A comparison of the results obtained with two methods of learning (material presented to the ear): first, when the members of the series of syllables are referred to certain prescribed external objects (circles arranged on a sheet of paper), and secondly when this external localisation is excluded, but no other methodical prohibition is laid upon the observer. With a slow rate of reading, the former method is always either as good as or better than the latter; with a quick rate, the external localisation may be disadvantageous on account of the difficulty of eye-movement. In most experimental series, the method with localisation excels the other as regards both number and times of the 'hits' made.] **J. Breuer.** 'Bemerkungen zu Dr. Hans Abels Abhandlung "über Nachempfindungen im Gebiete des kinasthetischen und statischen Sinnes".' **H. Abels.** 'Ist der "Nachschwindel" im Endorgan oder nervös bedingt? Zu den Bemerkungen Dr. Breuer's über meine Abhandlung: Über Nachempfindungen im Gebiete des kinasthetischen und statischen Sinnes.' [Controversy concerning the possibility of an after-image in the absence of conscious report of the inducing sensation; the validity of Ewald's experiments with the pneumatic hammer; the interpretation of the static organ offered by Breuer, etc.] Besprechung. **F. Kiesow.** 'Über einige Streitpunkte auf dem Gebiete des Geschmacks.' [Critique of Sternberg.] Literaturbericht.

Zeitschrift für Psychologie. Bd. xlv. Heft 3 und 4. **W. Jacobs.** 'Über das Lernen mit ausserer Lokalisation: Schluss.' [Discusses points of detail: the influence of practice and of the number of repetitions upon the number of hits; the retention of absolute position; the times taken for recitation; the mode of visual translation of the auditorily given series. Reports the results of additional experiments: 1 melodic series are learned more quickly than monotonous, with no difference between the two procedures of external and internal localisation; as regards number and times of hits, the external localisation appears to have the advantage in both forms of series; 2 localisation by objects is less advantageous than schematic external localisation; (3) in general, internal is preferable to external localisation for connected (as opposed to nonsense) material.] **V. Benussi.** 'Experimentelles über Vorstellungsinadäquatheit. ii. Gestaltmehrdeutigkeit und Inadäquatheitsumkehrung.' [Experiments with brief exposures of two sets of figures: the one interpretable as the Müller-Lyer figure, or as open and filled lines, or as two equal lines; the other, of the chess-board pattern, interpretable as two lines converging upwards, or converging downwards, or paralleled: variation of length of exposure, size, colour and brightness. Judgments of all three types are obtained, in different proportions under different circumstances, for both sets of figures. The results are explained in detail in terms of the author's theory of equivocal forms.] **R. Hamann.** 'Über die psychologischen Grundlagen des Bewegungsbegriffes. [The typical case of movement is movement of

one's own body in space. The term movement thus indicates, primarily, a complex of visual and kinæsthetic experiences; a visual impression is termed a movement only when it serves as motive to the reproduction of the kinæsthetic experiences. The typical visual impression of this sort is that of the change of position of an isolated object upon a complicated and comprehensive background. In other words, visual movement is not simply change of extension; we predicate movement of an object which is the contour of an extension, we predicate change of extension of the extension lying between the objects: the direction of attention is different in the two cases.] Besprechungen. [Offner on Lipps' *Leitfaden d. Psychologie*; Heller on Wahle's *Mechanismus d. geistigen Lebens.*] Literaturbericht.

KANT-STUDIEN. Vol. xii. Nos. 3, 4. October, 1907. **Bruno Bauch.** 'Kuno Fischer †.' [Short obituary notice.] **Oscar Ewald.** 'Die deutsche Philosophie im Jahre 1906.' [Translation of a paper originally written for the *Philosophical Review* (vol. xvi., 3). The general movement of modern German Philosophy is characterised as an attempt 'to repeat on a new basis the development of the idealistic world-view from Kant to Hegel'. The author refers to the renewed study of Fichte, Fries, Benecke, etc., and above all of *Hegel*: 'The year 1906 is specially distinguished by the re-birth of Hegel'. Other interesting points of the paper are the waning influence of Nietzsche; the popularity of Novalis; the fresh interest in mysticism; the neo-romanticism drawing its inspiration from Wagner; and side by side with this the ever-increasing influence of Goethe's classical ideals. Most of the important books of the year are referred to, but a striking omission is the absence of any mention of Eucken.] **Gottfried Fittbogen.** 'Kants Lehre vom radicalen Bösen.' [A detailed analysis of Kant's treatment of evil in *Religion within the Bounds of mere Reason.* The author shows that Kant fails in the end to explain how and why man acquires the bias to evil by an 'intelligible act' of reason. But he brings out clearly that Kant regarded good as even more fundamental in human nature than evil, and the ultimate victory of good over evil as the 'task' of the moral life.] **Alois Höfler.** 'Die unabhängigen Realitäten.' [A discussion of two recent treatments of the problem of a 'transcendent thing-in-itself,' *viz.*, Meinong's *Über die Erfahrungsgrundlagen unseres Wissens*, and Oelzelt-Newin's *Die unabhängigen Realitäten.* A central thesis of both these works is the denial that the relation between the transcendent real and the subjective experiences can be regarded as *causal.* Discussing this view the author tries to show that, whilst the metaphysical reals are independent on the self, the psychical phenomena in the self are dependent on the metaphysical reals, and that this relation is a 'kind of causality' in which, however, the temporal factor must be conceived as replaced by a 'metaphysical supra-temporal' relation.] **Felix Kuberka.** 'Sinnlichkeit und Denken, ein Beitrag zur Kantischen Erkenntnistheorie.' [The characteristic novelty of Kant's point of view is shown to be the assumption of a 'qualitative difference' between sensibility and thought. The author traces Kant's various attempts to formulate this difference.] **Anton Thomsen.** 'Aus Hegel's Frühzeit.' [The light thrown on the early years of Hegel's philosophical development (1792-99) by the manuscripts of his youthful theological writings, perserved in the Royal Library, Berlin, and recently published by Dr. H. Nohl.] **W. Reinecke.** 'Kant und Fries.' [A criticism of the publications of the neo-Frisian school, especially the essays of L. Nelson.] **E. Sänger.** 'Neue Darstellung und Deutung der Lehre Kant's vom Glauben.' [Review of two recent works on this subject.] **Bruno Bauch.** 'Eine neue

Ausgabe der Werke Nietzsche's.' [Review of the latest pocket edition.] **E. v. Aster.** 'Der 7. Band der Berliner Kant-Ausgabe.' [Review.] Recensionen, Selbstanzeigen, Mitteilungen: An unpublished letter of Kant's. Report of the Kantgesellschaft.

ARCHIV FÜR DIE GESAMTE PSYCHOLOGIE. Bd. ix., Heft 1. **H. Hielscher.** 'Das psychologische Verhältnis zwischen der allgemeinen Bildungsstufe eines Volkes und den in ihm sich gestaltenden Weltanschauungen.' [The student of the beginnings of philosophy must seek to understand the doctrines that have come down to us by projecting himself, psychologically, into the cultural conditions of the time and reconstructing ancient motives and habits of thought. Thus, the old Greek approaches the problem of knowledge from the standpoint of the harmony of man with nature: his attitude is at once cosmological, social, religious, juridical. The typical reactions of the human mind in the formation of philosophical conceptions can be traced very clearly in the case of the ancient Egyptians, to whom the visible creation revealed the attributes of God, was the body of God. Putting ourselves psychologically in their place, we can understand even the secular reverence paid to the mummified bodies of animals.] **E. Meumann.** 'Zur Frage der Sensibilität der inneren Organe.' [Surgeons and physiologists agree in essentials upon the point that the internal bodily organs are insensitive, with the exceptions that diaphragm and peritoneum parietale normally mediate sensations, and that in inflammatory conditions the other organs give rise to pain, either of themselves or by involving one or other of the two sensitive regions. On the other hand, psychologists and pathologists maintain that the interior of the body is full of sensations; pathological observations, in particular, give these sensations a very important *rôle* in the sphere of feeling and of the estimation of time. To reconcile these views, we have only to assume that (as is teleologically natural) the internal organs are insensitive to external, operative attack, and sensitive only to stimuli arising within them. The indefiniteness of organic sensation depends not on qualitative indeterminateness, but upon the lack of (visual) localisation. Head's law of reflex pains confirms the position taken in the paper.] **E. Meumann.** 'Über Organempfindungsträume und eine merkwürdige Traumerinnerung.' [Report of typical dreams, repeated with unusual constancy over a long period of years, and all rooted in organic sensations. Oftentimes, these sensations themselves appear in the dreams; but ordinarily the sense-material is held in the background by the ideational. The dreams offer a striking parallel to the variations of organic sensation which occur in the waking life.] **M. Urstein.** 'Ein Beitrag zur Psychologie der Aussage.' [Report of a flagrant case of mistaken identity of a prisoner.] **J. Freudenthal.** 'Über die Entwickelung der Lehre vom psychophysischen Parallelismus bei Spinoza.' [The *Tractatus brevis*, like the *Kritik der reinen Vernunft*, though in greater degree, is a medley of notes and essays written at different times. We distinguish three stages in Spinoza's thought. To escape from the vulgar view of interactionism, he makes the vital spirits mediate between body and mind, or gives mind only a directive influence upon bodily movement. As this is not satisfactory, he changes to the view that interaction is natural and necessary because body and mind are simply modes and parts of a single whole (Lotze). And as this in turn is not satisfactory—for the action of part upon part within a whole must itself be explained—Spinoza turns finally to his original doctrine of psychophysical parallelism. Although this is expressed partially and in some respects obscurely, it was never given up or changed by its author.] **J. W. Baird.** 'Erwiderung zu einigen Bemerkungen von Professor A. Kirschmann.' Literaturbericht. **H. J.**

**Watt.** 'Sammelbericht ii. über die neuere Forschung in der Gedächtnis- und Assoziationspsychologie aus dem Jahre 1905.' **Dannenberger.** 'Zur Literatur der forensischen Psychologie und Psychiatrie.' Referate. **R. Sommer.** 'Ein internationaler Kurs der gerichtlichen Psychologie und Psychiatrie.'

Archiv für Systematische Philosophie. Neue Folge. Band xiii. Heft 2. Mai, 1907. **Albert Sichler.** 'Über falsche Interpretation des kritischen Realismus Wundt's und Beurteilung von O. Pfisters kritischen Transzendental-Realismus' (second article). **Berthold Weiss.** 'Natürliche und sittliche Weltordnung.' [Analogies and contrasts between the natural and the moral order. Human goals can only be attained if they are identical with natural results.] **L. v. Renauld.** 'Freiheit und Arbeit.' [Not incompatible. The connexion between work and lack of freedom is breaking down.] **Robert Corwegh.** 'Ästhetische Grundfragen. Ein Versuch zu ihrer Lösung.' [Criticises Groos. How does one come to demand universality for æsthetic judgments? Æsthetic judgments must be rational judgments. Unity is the highest law of Art, corresponding to the unity of consciousness.] **Vincenzo Allara.** 'Sulla Causa del Cretinismo, Studio Critico—i.' **Anna Schapire.** 'Zu Hebbels Anschauungen über Kunst und künstlerisches Schaffen.' 'Bericht über Rechtsphilosophie aus den Jahren 1899-1906—ii.' **Von Fritz Berolzheimer.** Heft 3. August, 1907 **B. Lemcke.** 'De motu curvo.' [The direction of all motion is straight. Change of direction is not movement. Movement other than straight is change of direction.] **Kurt Geissler.** 'Die Dimensionen des Raumes und ihr Zusammenhang.' [Considerations arising out of his doctrine of Weitenbehaftungen.] **Stefan Sterling.** 'Die polinische Philosophie der Gegenwart.' [Discussion of Dr. Lukasiewicz's *Analysis and Construction of the Concept of Cause.*] **Wilhelm Frankl.** 'Gegenstandstheoretische Beiträge zur Lehre vom sogenannten logischen Quadrat.' **Vincenzo Allara.** 'Sulla Causa del Cretinismo—ii.' **George Eller.** 'Der Mensch und das Unendliche.' [Appreciation of Zucca's *L'Uomo e l'Infinito.* The conscious individual one in feeling and thought with the infinite.] Jahresbericht über die Literatur zur Metaphysik.—iv. **Von David Koigen.** Heft 4. November, 1907. **Ernst Vowinckel.** 'Determinismus in der Erziehung.' [Discusses the theologico-ethical and æsthetico-scientific theories of education. Education must aim at personal culture, and employ as its means *intellectual* experience in which the two sides of Freedom and Determinism are united.] **James Lindsay.** 'The Philosophy of Spain.' [Importance of Balmez, great nineteenth century representative of Neo-Scholasticism.] **Ludwig Baur.** 'Zur Religionsphilosophie.' [Discussion of Siebeck's *Zur Religionsphilosophie.*] **C. Bos.** 'Études de philosophie positive.' [Discussion of M. Belot's work.] **Oscar Ljungström.** 'Entwicklungslehre. Entwurf einer neuen Weltanschauung.' [The glimmering consciousness of new creative impulses and the beginnings of a higher faculty of knowledge point to the creation of a kingdom higher than the human.] **Vitalis Norström.** 'Naives und wissenschaftliches Weltbild.' [Draws attention to the distinction between the scientifically true and the real.] **Arthur Erich Haas.** 'Die Physik und das kosmologische Problem.' [Physics can give no support to Atheism.] **Georges Batault.** 'Nietzsche négateur de sa philosophie.' [His theory of the Will irreconcilable with his doctrine of the Overman.] **Ernst Schwarz.** 'Autologie und Logik. Eine "erkenntnistheoretische" Grundlegung.' [Criticism of epistemology and sketch of a new Logic, a Dynamic of Thought.]

Vierteljahrsschrift für Wissenschaftliche Philosophie und Soziologie. Jahrgang xxxi., Heft 2. Juni, 1907. **Max Frischeisen-Köhler.** 'Über den Begriff und den Satz des Bewusstseins.' [Discusses the psychological and epistemological meaning of this concept. Hypothetical introduction of a third concept, that of 'primary consciousness'. Empirical proof of this. It is only to this that the principle is applicable. It is the supreme condition of experience inner and outer.] **Carl Max Giessler.** 'Das Lautspurentasten bei der Erinnerung an Eigennamen.' [The recollection of proper names takes place under the same linguistic motives as are grounded in the very nature of speech itself.] **Eduard Reyer.** 'Das Einfache in der Natur.' [The simple, not the "natural," only something commensurate with our intelligence.] Besprechungen. Heft 3. August, 1907. **Georg Wernick.** 'Der Wirklichkeitsgedanke,' — v. Artikel. **Julius Pikler.** 'Beschreibung und Einschrankung.' [Criticism of Mach's new definition of the laws of nature as "Einschrankungen" instead of "Beschreibungen".] Besprechungen. [Contains review of W. Mitchell's *Structure and Growth of the Mind.*]

Rivista Filosofica. Anno ix., vol x. Fasc. ii. March-April, 1907. **A. Chiapelli.** 'Dalla Critica alla Metafisica.' [The whole spiritualistic movement of modern thought leads to the recognition that the reality of a thing consists in its relation to something else, the reality increasing with the complexity of the relations; and that consciousness or mind, presenting as it does the greatest unity of multiple relations, must be the deepest of realities.] **G. Bonfiglioli.** 'La Morale di Tertulliano.' [The extreme moral rigour of Tertullian, which is the secret of his adhesion to Montanism, has its origin, like his metaphysics and his psychology, in the Stoic philosophy.] **G. Della Valle.** 'Le premesse dell' Umanismo.' [By 'Humanism' this writer does not understand Pragmatism which he rejects as a one-sided view of reality, but a sort of mystical method which first gets rid of the contradictions attached to individualism by rising to the idea of society, and then to the absolute reality through the identification of object and subject.] **R. Montuori.** 'Dualismo biologico e limiti della responsabilità penale.' [If all actions are of the type of reflexes and not less necessary, how can legal punishments be justified? But the will is not a reflex; it belongs to the class of inhibitory actions.] Rassegna Bibliografica, etc. Fasc. iii., May, June, July, 1907. **A. Faggi.** 'Nominalismo e Realismo Geometrico.' [A careful analysis of the relations, both of difference and agreement, between Kant's interpretation of geometrical truth and the theories of such contemporary thinkers as Prof. Enriques of Bologna, H. Poincaré, Picard, and the writer himself.] **G. Salvadori.** 'Fede e Razione.' [Taking his text from Mr. Benn's recent *History of English Rationalism*, the writer discusses the general relations between reason and faith. Religious faith is defined as 'the belief in something that transcends the limits of ordinary experience, and the existence of which cannot therefore be scientifically demonstrated'.] **G. Mazzalorso.** 'Conoscere-operare.' [Interest is the guiding principle of knowledge, the interpretation of phenomena in terms of our intelligence, and interest also in the sense of happiness rightly understood is the creator of ethical values.] **G. Nolli.** 'A proposito di libertà.' [A discussion of Cantoni's doctrine of free will in its relation to Kant and Rosmini.] **R. Montuori.** 'Dualismo biologico e limiti della responsabilità penale (contin. e fine).' [A controversial discussion of the various juristic theories of punishment as a form of legitimate self-defence. It is proposed to supersede them by a physiological theory.] Rassegna Bibliografica, etc.

## IX.—NOTES.

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## SCHOPENHAUER'S CONCEPTION OF THE WILL.

In a notice of my recent book, *The Persistent Problems of Philosophy*, Mr. R. F. A. Hoernlé criticises in greatest detail the brief section on Schopenhauer's philosophy, and he chiefly objects to my conclusion that Schopenhauer virtually teaches that the ultimate reality, which he names Will, is self-conscious. Mr. Hoernlé says that "students of Schopenhauer will rub their eyes at this," and, if they adhere to the main tradition of the critics, doubtless they will. But the point at issue is, of course, the opinion of Schopenhauer, not that of any of his students—and I do not find that Mr. Hoernlé substantiates his objection to my reading. The passages which he cites in opposition are from "The World as Will and Idea," section 27 and section 54. The second of these offers not even a seeming contradiction of my conception of Schopenhauer's 'Will' as conscious, for (as indeed Mr. Hoernlé indicates) this section treats of "the world as idea, as object of consciousness" likening it to "a mere 'mirror' or 'shadow' of the will". The passage has therefore no bearing on the deeper question of the real nature of the

Will. But the other passage, section 27, as quoted by Mr. Hoernlé, might be supposed to controvert my teaching, for Schopenhauer is made to say that "consciousness" is a "light which the will lights for itself at a certain level of its objectivation". The term, however, which Mr. Hoernlé renders 'consciousness' is no other than *Vorstellung* (idea). In other words, this passage also has to do not with the ultimate nature of the will but with the nature of the idea, or phenomenon; rightly read, it therefore cannot affect, in one way or the other, my contention that by *Will* (at every stage of its objectivation) Schopenhauer must have meant conscious, though not human, will. In favour of this interpretation I must again lay stress on section 22 of "The World as Will and Idea" taken in connexion with sections 42-43 of "The Fourfold Root," and with a passage (*Werke*, ii., s. 517) of the "Kritik der Kantischen Philosophie". In the face of these passages I cannot, in response to Mr. Hoernlé's kindly suggestion, see my 'way to improving' my account of Schopenhauer until I more clearly understand what he makes of such statements as the following: "The word Will, which . . . is to open to us the innermost essence of everything in Nature in no sense stands for an unknown quantity . . . but for a somewhat which is known with absolute immediacy (*ein durchaus unmittelbar Erkanntes*). . . . The concept of will comes from the most immediate consciousness of every man, wherein a man immediately . . . knows and at the same time is his own individuality." (*Cf.* the remainder of the passage more fully quoted on pp. 350-351 of my book.)

I should be glad to consider Mr. Hoernlé's criticism of my chapter on Kant, but have no claim upon the space necessary for reopening the disputed questions of Kantian interpretation. I venture, however, to express a doubt whether Mr. Hoernlé sufficiently takes account of Kant's own distinction between thing-in-itself and noumenon; and I question whether my interpretation of Kant is wholly 'Hegelian'. However, I am far from wishing to exculpate myself from the charge of having a 'Hegelian point of view'; only, for myself and for my fellow Hegelians, I must challenge the statement that no one of us "has ever tried to face the problem [of presenting and criticising Kant's doctrine] from Kant's point of view". We may well have failed, but can Mr. Hoernlé be sure that we have not tried?

In conclusion, I wish to thank my reviewer for the statement that the "many references and quotations . . . would make it easy to use" my book "as a critical commentary side by side with . . . the original texts". These words indicate, I trust, that in his implication that the book is not 'trustworthy throughout,' Mr. Hoernlé has in mind mainly the criticised interpretations of Schopenhauer and of Kant.

MARY WHITON CALKINS.

## 'IF' AND 'IMPLY'.

Mr. Shearman's review of Mr. Russell's *Principles of Mathematics*, in last April's MIND, contains a quotation from that work which merits the serious attention of logicians. Adopting the usual view among logicians, that the implication "A implies B" (or "If A then B") is always equivalent to the disjunctive "Either A is false or B true," Mr. Russell is quoted as saying that "It follows from the above equivalence that of any two propositions there must be one which implies the other". A very brief symbolic operation will show that (*assuming his premises*) Mr. Russell is quite right; but surely the paradoxical conclusion at which he

arrives should give logicians pause. For nearly thirty years I have been vainly trying to convince them that this assumed invariable equivalence between a conditional (or implication) and a disjunctive is an error,[1] and now Mr. Shearman's quotation supplies me with a welcome test case which ought, I think, to decide the question finally in my favour. Take the two statements "He is a doctor" and "He is red-haired," each of which, observe, is a *variable*, because it may be true or false. Is it really the fact that one of these statements implies the other? Speaking of any Englishman taken at random out of those now living, can we truly say of him "If he is a doctor he is red-haired, or if he is red-haired he is a doctor"? Is it really a certainty that "either all English doctors are red-haired, or else all red-haired Englishmen are doctors"? To throw symbolic light upon the question, let the two symbols $(A : B)_1$ and $(A : B)_2$ respectively denote "A implies B," first in the sense which logicians in general give to this expression, and next in the sense which I give to it. Putting D for "He is a *doctor*" and R for "He is *red-haired*," Mr. Russell's reasoning (I presume) is

$$(D : R)_1 + (R : D)_2 = (D' + R) + (R' + D) = (D' + D) + (R' + R) = \epsilon + \epsilon = \epsilon.$$

My reasoning is

$$(D : R)_2 + (R : D)_2 = (D' + R)^\epsilon + (R' + D)^\epsilon = (DR')^\eta + (RD')^\eta = \eta + \eta = \eta.$$

Thus, Mr. Russell, arguing correctly from the customary convention of logicians, arrives at the strange conclusion that (among Englishmen) we may conclude from a man's red hair that he is a doctor, or from his being a doctor that (whatever appearances may say to the contrary) his hair is red. My argument, founded on what seems to me a more natural convention, and one more in accordance with ordinary linguistic usage, arrives at the (to me) self-evident result, that in neither case does the conclusion follow from the premises—that an Englishman may be red-haired without being a doctor, and that he may also be a doctor without being red-haired.

Let us next take an example from mathematics. Suppose A, B, C to be random points on the circumference of a circle, forming the angular points of a triangle ABC. Take the two variable statements "AB is greater than AC" and "The angle A is an acute angle". Is it not the fact that neither statement implies the other? How then can it be true that "Either the first implies the second, or else the second the first"?

Is it too much to hope that this test case will at last open the eyes of logicians to the necessity of accepting my three-fold division of statements $(\epsilon, \eta, \theta)$ with all its consequences? How far-reaching these consequences are can hardly be judged from my scattered papers in philosophical and scientific magazines. For a fair account of my system I must refer logicians to my recently published little volume on *Symbolic Logic and its Applications* (Longmans).

HUGH MACCOLL.

[1] The equivalence supposed holds good in the case of *constants* (*i.e.*, certainties and impossibilities), but not necessarily when the two statements are both *variables*.

MIND

A QUARTERLY REVIEW

OF

PSYCHOLOGY AND PHILOSOPHY

## I.—ON MEMORY AND JUDGMENT.

By F. H. Bradley.

My object in this paper is to throw light on the ultimate value of memory as a test of truth.[1] Memory, I shall contend, must have a subordinate position and validity, and otherwise we are reduced inevitably to total scepticism. Philosophy, if it is to be more than an exercise more or less desirable, must have an answer, I presume, to sceptical objections. On the other hand, I shall contend that there is no answer which does not involve the denial of memory's independence. Philosophy cannot exist apart from absolute sovereignty, and we have to choose between monarchy and chaos. But this means that in the end we can recognise nothing in the shape of a self-sufficient element or autonomous detail.

As soon as doubt is raised as to what we are finally justified in believing, that doubt, it is clear, drives us back on reflexion. And truth, if we go on to find it, will be a judgment which, when we reflect, satisfies us. Now, as to the nature of this special satisfaction there is of course much to be discussed, and there are points here on which I am unable to enter. But what I have to insist on here is a point which seems to be vital. Our last judgment, and that is our present judgment, must be taken or rather must be treated as infallible. This does not mean that a further reflexion may not cause us to reject it. It means that, until that reflexion comes, we must hold the judgment as true, and that

[1] This article may be taken as a sequel to one which appeared in Mind, N.S., No. 30, but it is independent. It was written some four or five years ago, and hence, for better or worse, contains no reference to any controversy of later date.

we cannot, while making a judgment, entertain the possibility of its error. Psychologically I should agree that there are various intensities of belief, and that, when I judge, my degree of confidence and my whole emotional tone may on each occasion be different. But the actual presence of an idea which is directly contrary to what I judge, would, taken psychically, be an effective hindrance to the presence of the judgment. It would prevent the making of the judgment or would destroy it if made. And again, when we view the matter logically, there seems left no room for doubt. As soon as a judgment is made you can of course then proceed to reflect on it. In this way what was your judgment can be turned into the object of a later thought. And taken thus you can approve of it and find it true, or you can reject it, in part or altogether, as a more or less complete mistake. Or again, unable to decide, you may regard it as doubtful. But in any case your re-affirmation, denial or doubt, goes beyond and supersedes the original judgment. They each add an element which in no case leaves that judgment as it was, but everywhere destroys in some sense its first character and force. As the object of later reflection, this, that was my present judgment, has been transformed, and now, whether it is doubted, denied or reaffirmed, it has been made subordinate to a later moment. It has been included and embraced in a new logical present, and its life, so far as it now lives, must be drawn from that inclusion. A mere past judgment, when I reflect on it, loses at once by my reflexion its own independent value. I am logically beyond it, while I obviously cannot go beyond my present judgment while that remains present. My present judgment therefore, while it exists, cannot possibly be doubted, and, however strange this may sound, it cannot be allowed or even suspected to be fallible.

Such a doctrine tends naturally to be misunderstood, and it suggests obvious objections some of which I will proceed to notice in passing. If every judgment can be superseded, how, I shall be asked, can any judgment be final? But, even if all past judgments hitherto had been corrected as wrong, I do not see how you could doubt the judgment which at present you make. For even if you make your judgment subject to a doubt, and if you so condition it, at least this conditional judgment of yours is made unconditionally. And, further, the supersession of a judgment need not mean its correction. If a judgment is reaffirmed it has been set on one side in its old character of 'this judgment,' but that which it affirmed has been made dependent on my

judgment which now is. The truth of my judgment has therefore become independent of its past assertion, but it certainly need not have been corrected or vitally transformed. And it is not difficult again to reply to a further objection. If every judgment is found, as being something human, to have the character of fallibility, how, we may be asked, can any judgment escape from this sentence? But a judgment, I reply, may be fallible only in its general character as being one judgment among others. Hence if you take it differently, as it certainly is taken in my actual present judgment, any such partial aspect may, without misgiving, be set on one side. The probability of error in other words was antecedent and abstract, and it cannot be applied to this case as this case actually exists. And if you insist that experience proves that every possible judgment is fallible in essence, you have involved yourself now in contradiction with yourself. For if this doctrine of yours is not certain, the conclusion which you draw from it vanishes, while, if it is certain, it for that very reason must itself become doubtful.

The objections we have noticed, it is clear, possess no force. We must continue so far to maintain that our last judgment in reflection is supreme. And memory, if so, cannot have independent worth, nor is it possible that my judgment can in the end depend on memory. But, before proceeding to defend and to explain this view, I will briefly point out what follows if the opposite is maintained.

The independent value of memory is often asserted. It suggests itself at times as an obvious fact, while at other times it comes in to stop a hole in some theory, and it may even be offered as a sure remedy for scepticism. But to me it seems that no long consideration is required in order to perceive that such a doctrine is ruinously sceptical. Memory is used in a number of different senses.[1] It may stand for my present judgment as to some past event of mine, or its meaning may be stretched so as to include everything which falls under retentiveness. So far therefore as in a judgment we have a succession of perceptions or ideas, we must (it will be said) postulate memory in some sense in order to prevent a solution of continuity. For otherwise, with a broken succession of different subjects, we infallibly must lose all we gain by the way, and at the end of the process can have nothing to show. And again, since our present meaning must depend on our past experience, we cannot now, it is

[1] Mind, N.S., No. 30.

further urged, even begin to think at all, except so far as we take our stand on the faculty of memory.[1]

Now no one can deny that in a sense we depend on past experience. For, apart from any other consideration, it is from past experience that in the main our minds are filled. And generally to suppose that without the past we should have an intelligible present seems obviously absurd. We bring, to the present from the past, materials, furniture and implements, and no one, so far as I am aware, could even seek to deny this. But this, on the other hand, is not really the point which is at issue. The result of the past, I maintain, is to be used as material with regard to which the decision of the present is supreme. This result has not got to be accepted, as it comes, and in the form which it bears; and taken in its own character it has no ultimate and independent worth. To contend on the other hand for our ultimate dependence on memory, is to claim in effect for this mere result from the past a position and value which is independent and absolute. And, held in any form, such a doctrine, I urge, must lead us to ruin.

In the first place it gains little if any support from Common Sense. Common Sense goes no further than to take some memory as practically certain, while it allows that memory in general may be mistaken and is corrigible. But, on the other hand, anything which stands independently seems not capable of correction. If however, passing from Common Sense, we consider the facts, we seem forced to admit that memory is fallible to an indefinite extreme. If you add to ordinary mistakes those cases of error which are called pathological, and include in these the results of hypnotic experiment, there seems no limit to the possibility of memory's failure.[2] And the position is no better where the meaning of memory is improperly widened, and covers in general our present use of past perception or judgment. For past experience may be incorrectly retained or connected wrongly

[1] See Dr. Venn, *Empirical Logic*, 116-118. Dr. Venn appears to accept here some traditional psychology which at best is doubtful. I do not know how he would propose to meet the sceptical result from his view of memory. This last remark applies again to other writers.

[2] I have, in MIND, N.S., No. 30, criticised Prof. Ladd's position with regard to this point, *Philosophy of Mind*, p. 133. To hold that memory cannot be wrong as to the fact of my past existence is, even if tenable in the abstract, quite futile, because it is tenable only in the abstract. If my memory may be wrong so far as it says anything about my past existence—and this apparently Prof. Ladd does not deny—how much is left for it to assert infallibly I hardly comprehend. But see the article referred to.

with a present instance, and at what point here a line can be drawn I am unable to perceive. In short to hold that memory is not fallible seems to entail the denial of plain fact. But if on the other hand my present judgment is to depend on something falling outside of itself, then unless that something (whatever it is) can be taken as infallible, my judgment must be taken as liable to error. In other words, if memory is to have an independent standing and value, we are condemned, so far as I see, to unlimited scepticism.

Still, it will be objected, if the alternative you offer is to throw away all past results, your alternative itself in the end is ruinous. But it is your mistake, I reply, which brings in such a vicious alternative. To say that no past result has independent and absolute value is not to deny that past results are in another sense indispensable. Past results are in short to be used as material out of which my present judgment has to make a construction; but there is no standing conjunction in this material which is in principle sacred.[1] Any past judgment is taken as fallible in principle, and as capable of being overruled by a present judgment which rearranges its material. On the other hand there is no question as to the throwing away of all or of any material. The question is whether the material, when used in my present judgment, has any connexions which, taken as they stand, retain absolute validity, or whether on the contrary the validity of all now depends on my present judgment and is subject to that. I have shown that the independent worth of past connexions means present ruin. On the other side the superiority of present to past judgment entails apart from misunderstanding no mischievous consequence. It is compatible with the doctrine that any judgment once made must stand until overridden, a doctrine the truth of which will be discussed lower down. The fact in short that all judgments are, as judgments, corrigible, does not imply that every judgment is in fact to be corrected. And again the general rule on which

[1] I regret that I cannot, while correcting this paper for the press, remark on the position lately taken by Mr. Russell and again by Prof. Stout. But in passing I would emphasise the following point. Our object is to make the widest and most harmonious construction. In order to carry out this object we accept, and we must accept, remembered past facts. But we accept them only provisionally, and subject in any particular case to correction in the light of further Knowledge. The reason why we do not in the same way accept what is offered by mere fancy, is that on such a principle of action we could not make the intellectual construction which we seek. I must hope before long to return to this point.

we act with regard to memory, our presumption, that is, that memory is correct except so far as we have a special reason to doubt it, in no way conflicts with the superiority of present judgment. It would conflict with this only if our last judgment were to pronounce the above rule to be invalid. And if it is urged that memory, though corrected, is corrected only by further memory, such an objection, it seems to me, can be easily disposed of. What it states is not true except in part, and is not true in the end. For memory at times seems to be corrected not by memory but by inference. And, apart from this and in general, I am unable to understand how an infallible memory can possibly correct itself. It is to me on the other hand intelligible that diverse memories can and do radically conflict, and that such a collision, if we have no higher criterion, leads inevitably to scepticism. In fact and in truth memory, wherever corrected, is corrected by a judgment. This judgment in different cases may differ widely. It may make use of a greater or less amount of materials, and it may or may not be itself a memory-judgment. Certainly, where our last judgment is a memory-judgment, it remains none the less infallible, but this, it is plain, does not show memory to be infallible in general. We have a special memory-judgment which we cannot doubt so long as it remains our last judgment. This judgment however is infallible not because it is memory but because it is our last judgment. Memory in short becomes for you infallible only where you judge that all memory is infallible. But such a judgment, we have seen, is dispelled by reflexion, and must give way to another which pronounces it false.

I have so far urged that a present judgment cannot be treated as fallible, and that as against this nothing outside can possess any force. And I have argued that to assign an independent and ultimate value to memory leads necessarily to scepticism. On the other hand the doctrine which I advocate requires explanation, for it seems itself to invite and to justify sceptical doubt. "If to rest on memory," it will be objected, "is to build upon sand, it is after all upon sand that your doctrine is based. For you cannot deny that your judgment requires time and is successive, and you cannot deny that the result of past experience now qualifies your judgment. Even if in some instance you contend that this is not visibly the case, yet in no instance can you exclude the doubt or even the presumption that really it is so. And hence, if you will not invoke a 'faculty of Memory,' and if

you will not go on to assume that this 'faculty' is infallible, your own conclusion will in any case fall into ruin. For your judgment in the end will stand on something external and foreign, something the truth of which will remain at best precarious. And your judgment itself, when arrived at its end, will fail to connect its end with that beginning of itself which now has perished. It is only through memory that a judg nent is one, and any judgment that is not one, is no judgment at all." This objection seems serious, and we must endeavour to meet it.

We are led at once to recall a principle, well-known but often neglected, the distinction between a judgment viewed in its logical and, on the other side, in its psychical aspect.[1] Every judgment on the one hand asserts an ideal content. It asserts this of something which is other than that content and other than the judgment itself. Again, on the other hand, every judgment is a state of myself. Now a state of myself has lapse and has duration indefinitely divisible, and it is a product which results from external conditions. But you cannot take these characters which belong to my state, when I assert, and use them to qualify that which I assert. On the contrary my assertion in this latter sense must, except for certain purposes, be taken as independent of my state as asserting. And for our present purpose certainly we must so take it as independent. The thing affirmed is different from what goes on in my mind as I affirm it, and you cannot take the nature and the origin of this last and apply them to qualify the matter which I affirm. My judgment that 'ginger is hot in the mouth' contains no reference to any origin in past instances of ginger. And again this judgment does not involve an internal sequence and lapse, and warrant an ensuing doubt as to the identity of 'ginger' when 'mouth' is reached. Everything of this kind is at once extraneous and so far unknown. And when by reflexion it is reached, you have *ipso facto* left your original assertion and have passed on to others. These other judgments, with regard to your state when asserting, cannot except though a mistake be made to conflict with your original judgment. And they themselves, when made, are valid merely so far as they are assertions. And in this character they themselves exclude any reference to my psychical state as at present I make them.

Every judgment may be taken to involve a psychical lapse

[1] I may remind the reader that I am not here replying to scepticism in general, but only to one kind of sceptical objection.

and succession, but this aspect of its existence falls outside of the judgment as logical. If, for instance, the judgment asserts a succession, this is not the succession which belongs to its existence as a psychical fact. And again the judgment need not assert any succession at all. In this case within the judgment there is no succession; and whether we begin (as we say) with the subject or begin with the predicate, and whether again the process endures for the fraction of a second or for an hour or for a century—this is all in itself indifferent to the content asserted. And no lapse or change outside this content can affect the unity of our judgment. Nothing in short can affect our judgment except from the inside. And hence anything external, whether it is psychical lapse or again the previous existence or worth of some element in the judgment, must remain irrelevant. If it is to enter the judgment it must put off its external character. And thus within the judgment no complexity of detail or structure prevents the judgment being one, so long as no element is allowed to retain an independent force. You may urge that my judgment stands or falls with the truth of some element contained within it, and you may insist that this truth comes from nowhere but previous experience. But all this to my judgment is either unknown and so nothing, or else, if known and admitted, is the destruction of my judgment, as such. These considerations, true or false, have in any case gone beyond my present judgment, and they have taken me, if anywhere, on to a new judgment. But this new judgment, like the former one, itself guarantees its own contents, and to me, while it lasts, cannot seem to be fallible.

Such a doctrine, I know, must appear to be ridiculous. It is absurd, I shall be told, to suggest that there is no reason for my judgment being true except the fact that it is there, and it is perverse to recommend me to hold my judgment standing in order to keep it infallible. But I have made, I reply, no suggestion of this kind. I agree on the contrary that it is our duty to ask and to reflect, and to supersede one judgment by another. Thus 'He is the person who did that last week,' may be superseded by 'The truth of that depends merely on my recollection,' and this by 'After all one must trust one's memory,' and this again by 'In the present case the main point is uncertain'. But it does not follow that before a judgment is superseded I am to take it as fallible. And I agree once more that there is a reason why judgments are true or else false. There is a character which, when I reflect, leads me to prefer one judgment to another, and leads

me even to reject both of them if neither will satisfy. But this character, I would urge, is not external to my judgments, and to make the truth of a judgment depend on something which falls outside itself, must lead in the end, if you follow it to the end, into scepticism or nonsense. But at present I am not inquiring into the nature of this character. The point, on which I am insisting here, is one-sided, if you please, but none the less I must insist on it as evident and necessary. I cannot, while I make a judgment, at the same time also doubt it. I cannot doubt or deny a judgment without going beyond this judgment and without making it a part in some wider ideal whole.[1] And at least I cannot deny it except by another judgment which I cannot at once make and regard as fallible. And, while I make a judgment, that which falls outside it is so far nothing to me. The psychical existence with its lapse and its duration is nothing. The priority or independence of any portion of its content is nothing. These things cannot be anything for the judgment till they are brought into the judgment, until, that is, the judgment is superseded by another, itself now infallible. We may end with the decision that there are conflicting ideas between which I am unable to decide, or we may conclude that, in the end and in its full exactitude, no conclusion is tenable. But even here our decision and our conclusion, if we make it, is indubitable, until at least it has been banished or superseded by something beyond itself. And, while I agree that this contention may perhaps be called obvious and trivial, I must insist that it is not on that account to be treated as false.[2]

We have so far seen that my present judgment cannot be taken as fallible, and further that in a sense it must be self-contained. Whatever independent reason there may be for or against its assertion, that reason, while independent, is nothing to my judgment. And if it becomes something for me, then forthwith I have gone beyond my original judgment, which thus has ceased to exist. This conclusion, if

[1] By doubt here I do not mean the mere psychical oscillation in which, after failure or rejection, the judgment merely comes back again as it was. I mean by doubt the state where the judgment is made an object, and where another idea is held as opposed to it. Again in denial the reader must remember that a judgment may be denied from a basis which is not made explicit. The denial here merely takes the form of This judgment does not satisfy me.

[2] In what sense a judgment is self-contained, and how we are able to correct one judgment by another, are of course further questions. They involve great difficulties which cannot be discussed here.

trivial, seems certain, but it leads at once to a further question. What am I to mean by one judgment, and how am I to know that one judgment is over and has been succeeded by another? For, if on this point I remain in doubt, our doctrine, however true, will remain inapplicable. When I say to-day that 'Cæsar is sick,' and to-morrow that 'he is well,' we naturally should take this as a succession of judgments. But if I tell you that 'he has crossed the street and has now entered that shop,' you probably take these successive events to be expressed in one judgment. Indeed otherwise we should be led to doubt if in the end any judgment is one. And hence it is necessary to seek a principle by which to decide whether in any given case we have several judgments or one judgment.

The singleness of a judgment lies in the identity of its subject. Its unity in other words admits no solution of logical continuity. The subject throughout must be one, and it must remain one for me, and otherwise we have either two judgments or none. I take this answer to be correct, but it needs further explanation, and I will begin by excluding a view which for our present purpose is too wide. The whole of experience, it can be said, forms a single continuous judgment, for, so far as it is intellectual, it is the qualification of one real subject. And all our diversity belongs to and is predicated of this unbroken reality. Such a doctrine states what I accept in principle as a fundamental truth, but for our present purpose this truth is stated too widely. The judgment we are seeking here is that judgment which I myself make as one, and in which the unity of the subject is unbroken for me. And, unless the whole of experience is now the object of my reflexion, the unity of the subject must fall within narrower limits. There are past judgments that have been made and that now are forgotten, while there are others which, forgotten or not, have at some time been overridden and corrected. And, since these judgments clearly are not now present to my mind when I judge, they cannot for my mind be included in my present judgment. The one subject, though so determined, is not determined so for me, and this last qualification seems here to be essential.

What I mean by one judgment is an ideal determination of reality in which for my mind the subject remains one and unbroken. It is not enough that at the end I merely have still the same subject, for I may have the same subject in a succession of different judgments. A judgment is one when its subject keeps hold throughout of the diversity, and carries with it to the end everything which it has gained in its pro-

cess.[1] The dropping on the road of that character which has been taken up by the way is the fault which makes a solution of logical continuity and draws a line across the process. I have a single judgment where for me the one subject qualifies itself continuously and qualifies itself cumulatively. Our most natural expression here is in short the much abused phrase 'development' or 'evolution'.[2]

I will go on to illustrate the above by some ordinary examples, but I must first call attention to a point of importance. By the subject of a judgment I do not mean the mere grammatical subject, or that again which at first sight may seem to be the real subject. The real subject is that, whatever it is, which does in fact qualify itself continuously in the way I have mentioned. In any given judgment to discover what this individual subject is, you must inquire into the meaning of the special judgment before you. And the answer cannot be reached by the application of any general rule.[3]

I will now give some instances of the principle which we laid down above. If I first say that A has travelled from Paris to London, and then later add that A has travelled from London to Liverpool, we have probably two judgments. If I say on the contrary that, having travelled from Paris to London, he thence went to Liverpool, there is presumably but one judgment. The first half of the journey has in this latter case not dropped off from the subject, and hence we have here no solution of continuity. To assert 'John is in London' and then 'William is in London,' may or may not be one judgment, but 'John and William are in London' is certainly one assertion. For here, when we arrive at William, we have not let fall John. The most natural example is the seeking of means for an end, and let us take the attempt to trace mentally a path up a cliff or across a morass or torrent. We are forced perhaps to make in idea a variety of partial passages before we find a way which will lead from the beginning to the end. Now this

[1] Everything, that is, which is essential. See below.

[2] I seem to observe now that scarcely any one, who sets a value on himself intellectually, ventures to use the former of these phrases when he can bring in the latter. It is perhaps difficult for any of us wholly to avoid cant.

[3] The doctrine of 'the universe of discourse' (the phrase is far from being elegant) has been useful, but it fails here to give us much help. It rightly calls attention to the truth (to the discussion of which I hope at some time to return) that judgments are made subject to an unexpressed qualification. Thus when we say that a chimæra does not or again does exist, the term 'existence' in each case has a different meaning. But if we ask whether 'existence' here is or is not the real subject of the judgment, the doctrine of the 'universe of discourse' seems to fail us.

way, when we find it, is a continuous ideal sequence, and it is assuredly one judgment. Its stages on the other hand, while you trace them piecemeal, are many judgments in succession, and so are the fragmentary mental passages which have refused to come together. It is one judgment where the subject, on arriving at the second step, takes that step in the character of a subject which has been qualified by the first step, a subject which carries the beginning and every stage of its process continuously with it to the end.[1] And we fail to have a single judgment so far as the subject, when arrived at the end, has dropped by the way any part of its career. But the whole mental collection once again and in a different way may become one judgment. For I may take it not now as a connected ideal means to my end, but as one continuous sequence of psychical events and as one passage in my history. In brief, though it is not true that all judgments express succession, the example of a series best illustrates the unity of judgment. Anything so far as I take it as a series is assuredly one judgment, for, as so taken, it consists in a single subject which develops itself without break or loss. The nature of this subject, I should agree, is not easy to fix, but without it I am forced to conclude that a series is unmeaning. If like a child or an idiot I thoughtlessly repeat *ab*, *ab*, that obviously for myself is no series at all. It is a series for me so far as I take the sequence *abab* as one process. And I do not take it as one process unless the second *ab* is qualified by the first, unless, that is, the subject of the series carries the first *ab* with it to the second and so on continuously. Every process of reasoning will on the same principle be contained in one judgment, so long, that is, as the subject is unbrokenly determined. Suppose, for instance, that I have proved that there was no possible person, outside of A and B, at a certain place. If I then, without that result leaving my mind, show that A was elsewhere, and that hence B was present, this whole process, it seems to me, must be called one judgment. And it will be one judgment again even if the first result has left my mind, and if then, learning that A was elsewhere, I resume this knowledge which has lapsed and so draw the conclusion. But it will be only so far as resumed that my first result enters into my final judgment. My first result, if you take it apart from the further judgment that A was elsewhere, is merely one judgment which then is succeeded in time by another. And these two successive pieces of knowledge as separate are simply two judgments.

[1] This statement is once more made subject to explanation given below.

But so far as one subject carries with it the whole content unbroken from the beginning to the end, we have one process of inference and with this a single judgment.[1] And it is one inference and one judgment just because, and just so far as, it does not admit the existence of anything disconnected and independent. It is one judgment, we may say, so far as it excludes anything like memory.

I will pass now from the general question to consider some special difficulties. Has the subject in a judgment, we may be asked, really to carry on everything? Is not on the contrary some acquired detail often dropped on the way? Certainly I should agree that not every detail need be carried on to the end. And I should agree that such a retention is often both useless and impossible. If for example I judge that a vehicle has passed from A to D, my final judgment may or may not contain its passage through B and C. But as to the observed incidents, however trifling, which have qualified the whole movement, it is absurd to suppose that their presence in the judgment is essential. These things are not essential because they fall outside of the judgment's purpose and interest, and because everything which is external to this is irrelevant. I cannot ask here in what the interest of a judgment consists, but every judgment, I must insist, is made in some special interest. It is this interest which defines and limits the amount of identity required in the subject, and determines what details may be called accidental. Such details may never have been taken up by the subject, or again, if taken up, they need not be carried on, or, even if carried on, they may at the end be neglected. Such a process it is clear must imply some abstraction, and therefore, we may add, must run the risk to which in the end all judgment is liable. But certainly the subject in a judgment need retain no qualification which is not essential. And hence with every judgment, such as 'the carriage has passed from A to D,' we may have other judgments as to the details which happened to the carriage in its passage. And these judgments may be called accompaniments of the main judgment and are not now contained in it. Nothing in short need be contained in the judgment except what is relevant to its purpose. And our conclusion may be summed up thus, that we have so far one judgment so far as one ideal content develops itself for me continuously without loss from beginning to end. We may go on from this point to consider a further difficulty.

[1] *Cf.* here MIND, N.S., No. 30.

The subject of the judgment, we have seen, must remain continuously before my mind, but there is a question as to the sense in which it has so to maintain itself. When I trace a genealogy it is clear that I end with a judgment, but as to the subject which maintains itself, and as to how much that subject carries on, we are left after all in some perplexity. And there are cases where our perplexity is heightened. If I have seen a man enter a certain house, and if I watch to observe who comes out, certainly here once again the result is a judgment. That same subject which appeared at the beginning is further determined at the end of the process. On the other hand we can hardly say that everywhere this subject has, perhaps through some hours, been maintained before my mind.

The difficulty which we find in such cases is due, I think, to several causes. (*a*) The subject in the first place, if present throughout, may be present in more than one shape. The subject may have a character which is more or less fully individualised, or again it may be abbreviated and made schematic to a greater or less degree. (*b*) In the second place the real and the apparent subject may differ widely, and the former may remain though the latter has lapsed. (*c*) In the third place, though the subject and with it the judgment has lapsed, yet the process at its end may result in a judgment. And, since in this ensuing judgment the original subject may once more appear, it may hence naturally seem to have been present throughout.

(*a*) Every judgment, we may remind ourselves, is made in a certain interest; and hence, to discover the shape in which the subject is present, we should begin by asking for the sense in which that subject is wanted. When for instance I trace a pedigree from A to Z, I may for the moment perhaps desire only to know that the connexion is direct and unbroken. Thus I begin with A, and I end with the judgment 'A is the direct ancestor of Z'. And A in this case may throughout the process have remained before my mind, and may never for one moment have lapsed by the way. But how much has qualified A on its road, and in what precise sense A at the end has been modified, is a question which may admit of various answers. Where the series is very short all its steps may possibly remain before my mind, and each severally may in some shape appear in the final judgment. But such a complete retention is in most cases neither possible nor wanted. If what I require is to join Z to A by a certain kind of connexion, then the length of the line and its other characters may be called immaterial.

The genealogy with its several steps may be present only in a form which is highly abbreviated and schematic. And in fact all that in the end connects A with Z may be the idea of progression through a series, which in respect of its length and its constituent members is left more or less general and undefined. But, so long as A has maintained itself throughout in an unbroken progress, there has been in any case a single judgment throughout. For the several stages of A's journey on its way to D, if you take them in their particular character, are here mere external and irrelevant incidents.

(*b*) There is one judgment (we know) so long as one subject develops itself continuously. But, even where the subject may appear to have lapsed, this lapse, we must add, need not affect the real subject of the judgment. For the real subject (this distinction is of supreme importance) may be different from that which at first sight offers itself to us as such. When I trace a genealogy from A to Z, there may come a point at which A is no longer before my mind, but then on the other hand A may not have been the real subject of the process. The actual object of my inquiry may be in fact the whole series. Hence it is the whole series which determines itself continuously before me, and is here the genuine subject of my judgment. I may seek for example to discover the length of this series, or again the presence of some quality in its several members or in their modes of sequence. And so far as, however vaguely and schematically, the series as a whole maintains itself before me and develops itself ideally, the result so far is a single judgment. It is accompanied probably by other judgments which I make on the way. But these, so far as they are let fall and not carried on to the end, will fail to appear in my final judgment. They will be mere incidents which once belonged to past stages of its course.

In the same way, when watching a house, I may perceive the exit of A or of B, and may end with the judgment that it was A or B who there entered and remained. A man known to be inside may be no doubt here the genuine subject, and throughout he may have been waiting before my mind to be determined further. But on the other hand the subject may have been not the man but the house, or again more generally the whole scene or situation concerned. But so long as while watching I have kept before me something, however vague, to be determined further, and so long as my judgment at the end does determine this subject, there has been an unbroken judgment throughout. And through the

whole process of watching this final judgment, we must say, has been continuously in making.

(c) On the other hand the state of watching, if prolonged, tends naturally to degenerate. There may be no constant subject there which develops itself without lapse before my mind. And in this case the process may result in a judgment, but you cannot say that this judgment has been present throughout. When I set myself to watch a house I may allow the subject more or less to lapse from my mind. I place myself usually, as we say, so as to keep the door in sight or so as perhaps to hear it if opened. I keep myself, that is, so that any change of a certain kind at once attracts my attention. But here my not forgetting, as we say, to be attentive does not imply the continuous presence of an idea before my mind. It does not in short mean that all the time I am attending actually. The house may be associated with the general scene and with my felt uneasiness, so that its absence from my view tends to recall me with a kind of shock. On the other hand the renewed sight of the house renews my uneasiness, and any observed change in it along the line of my more special association at once arrests and occupies me. Then comes a judgment, and this judgment qualifies, we may agree, the original and the main object of my watching. But since the subject has not developed itself unbrokenly before me, there has not been here, I must insist, a single judgment. Certainly I may have had before me through all the time a more ultimate subject that has not lapsed. Reality as the general scene in which I am included has perhaps maintained itself as my object. And this general object will from time to time have qualified itself by a changing succession of miscellaneous judgments. But on the other side these judgments have, at least for my mind, not been the development of my subject. A judgment has been made and then dropped, and has given way to another judgment which in its turn has passed away. And hence, when at the end my final judgment is reached, these foregoing judgments have not led up to that result and they are not contained in it. And I may even, let us suppose, for a time have been asleep, and am roused, let us say, by the unbarring of the door. The judgment, which follows here, will qualify the subject which I have set myself to watch, but you could not add that this subject has been continuously before me. The subject of my judgment has been recalled at the end, and it is at the end that this final judgment begins.

The matter is so important that I may be permitted per-

haps to repeat and to insist on these distinctions. A feeling which is in my mind and qualifies my felt self is one thing, and an object qualified ideally before my mind is another thing. And what we call a condition of watchfulness or of attention or of standing will, may amount to little or no more than an emotional state.[1] It need not involve the development of a single ideal content throughout the process, and the process is therefore not one judgment or volition. Even a melody, as I hear it, is not in itself a single judgment or idea. Certainly it is a whole, and it may be attended by and it may result in one or more judgments, but in itself it is not the progressive qualification of a subject which develops itself ideally before the mind.[2] And again we must hold fast the distinction between a judgment passed at the end of a sequence, and a judgment which throughout the sequence has made itself continuously. When I observe A, which after an interval is to be followed by B, A, as perceived, may produce in me a certain felt state. Then, when B supervenes, its perception may cause an alteration in that feeling, an alteration which I recognise as having the familiar quality, say, of stronger or weaker. And on this I judge that B is stronger or weaker than A. But it does not follow that throughout the interval A has remained before my mind. For, when B produces a felt change with a recognised quality, the whole situation may by association reproduce A, which has lapsed, and A being reproduced is thus qualified by the judgment. Hence you cannot infer in this case the continuous presence of A, and you cannot on the other hand contend that A is absent from the final judgment. For to judge about anything in its absence seems really meaningless.[3] And on the other side the presence of A at the end is consistent with the fact that it has lapsed on the way.

The unity of a judgment, we have now seen, lies in the

[1] And it hardly, taken at some moments, need even amount actually to that. *Cf.* MIND, N.S., No. 41, p. 26.

[2] I am forced to dissent on this point from Prof. Royce as I understand him.

[3] This however appears to be the conclusion which was adopted by Prof. Schumann, *Zeitschrift für Psych.*, Bd. xvii., an article noticed in MIND, N.S., No. 33, by the Editor. To myself not only this conclusion but Prof. Schumann's general view of judgment, as there developed, is quite unintelligible. What precisely his observers took to be and not to be before their minds, when after an interval they made their judgment, is a point to which insufficient attention seems to have been directed. I would venture to suggest that, here once more, from want of theoretical inquiry beforehand, the experiments were largely based on a vicious alternative.

continuous development of one ideal content. This unity is logical, and to base the essence of it on a psychical state seems at best superfluous. You may argue that it is one judgment where we have a single act of attention, and this answer at first sight may appear satisfactory. But when on the other side we inquire as to the singleness of the act, we must fall back, it seems to me, upon the oneness of the idea.[1] Again the unity of a judgment can be sought in its interest, and from this we may go on to argue that it consists in the singleness of a purpose or conation. But if you ask where the unity of this conation resides, then once more I should say we come back to an idea, and to that unbroken continuity which we have urged as essential. At all events an inquiry into this logical essence is needed, and it cannot be avoided by any reference, however correct, to any psychical state.[2]

Thus an answer to the question of the unity in a judgment does not in principle call for an appeal to psychology. On the other hand there are points where such an appeal, although not necessary, seems desirable, and I refer specially to the duration which we allow to a judgment. Certainly the content of the judgment is one thing and its psychical duration is another thing, and in principle we have seen that the duration is irrelevant. On the other side every judgment is a psychical event and has therefore duration. Wholly to deny the existence of this aspect seems a fundamental error,[3] and even to ignore it in practice may lead to inconvenience. Thus to regard all experience, or even all my experience, as one judgment may fairly, as we saw, be called inconvenient. And wherever for me there is a break in the progressive development of the subject, we agreed to deny the unity of the judgment. Taking this as our principle it is perhaps well to apply it still further. Let us take an instance where the subject, say a house to be watched, remains continuously before my mind. Here I notice first that a person A has left the house, and then after an interval I notice the exit of B, and I judge, on this, that the house contained both A and B. Now if for one moment of this process A has lapsed entirely from

[1] *Cf.* MIND, N.S., No. 41.

[2] I am not asking here how the unity of the idea is in fact maintained. That is a further question which here I think it is not needful to discuss. All that I urge here is this, that the unity of the ideal content is essential, and that, unless you both recognise this unity and also treat it as a feature belonging to or resulting from a certain psychological state, the appeal to psychology has added nothing. And in any case the addition seems here quite unnecessary.

[3] This fatally unsound position seems to me to be taken by Prof. Münsterberg in his *Grundzüge d. Psychologie.*

my mind, we cannot say that one judgment has been present throughout.[1] But suppose that the subject, as qualified by A, has maintained itself till B has been added, can we then say that the development has been continuous throughout? Logically we can affirm this, but psychically the ideal movement, while I waited for B, made no advance. And it is better perhaps to allow that the process has not been continuous, and to make the final judgment begin on the perception of B. And even in tracing a genealogy, where the ideal advance of the subject does not pause, but where this unbroken process may last through a considerable time, it is wiser, I think, in practice not to insist on so much duration for the judgment. I should prefer to hold that the subject is qualified through a succession of judgments, and that the final judgment as to the whole applies this result, but is not itself actually there till we come to the end. But, if on this point the reader prefers to take a different view, I could not insist that he is in error.

Logically the duration of a judgment, if viewed merely as psychical, is irrelevant. But taken otherwise that duration may give cause for misgiving. The longer a subject has remained before my mind, the less chance, you may urge, has that subject of preserving its identity. And this is not because change, while only psychical, can qualify our subject, but because we fear that some change may in fact not have remained psychical merely, but on the contrary may have been taken up into the subject's content. And again we may doubt whether a subject can really be warranted to be the same, because I during its career have not noticed a difference. But, so far as the purpose of this article is concerned, we already have discussed the force of these suspicions. As long as our judgment is present, then to whatever length it has been extended, that judgment for us is infallible. And we can apply the above objections to our judgment only by subordinating it to a further judgment which itself is infallible. Nor is it necessary, I think, here to enlarge further on this head. We cannot allow that in principle the duration of a judgment can be an argument against its unity. On the other hand in practice it is better to meet and, if we can, to obviate objections. If at the end of a series my judgment extends the real identity of the subject, so as logically to include the whole series, and so that now throughout the whole series we have one development of ideal content,

[1] The qualification of the house by A is not present, we may presume, actually on the exit of B, but is then recalled. The judgment therefore begins at this point.

that, I imagine, is all which can be called essential. And so long as I do this, it makes no matter how schematically it is done, and it makes no matter at what point of the psychical process my judgment begins, whether at the first stage, or in the middle, or at the close of the process. Hence if to postulate an act of judgment enduring beyond a certain duration is inconvenient, such a postulate to me seems uncalled for and undesirable. The duration of a judgment should therefore perhaps be restricted to whatever can be fairly taken as one psychical 'now'.

And for this restriction there is a ground which is deeper than mere convenience. A judgment in the last resort must in a sense depend on my feeling. It is true or false in the end because it is felt to satisfy me in a certain manner, or felt again in a certain way to be offensive.[1] This aspect of the case has necessarily its psychical side. If in the end my judgment is coincident with a certain feeling, the duration of that feeling cannot well be disregarded. And with respect to this duration also it is better to avoid any strain on the facts. In any case we have seen that by extending the actual duration of our judgment we should have gained nothing worth fighting for.

I will pass from this to deal, rapidly and in conclusion, with several questions. Every judgment, while I make it, must be taken by me as infallible, but, when once it has been made, the situation seems altered. A judgment, we saw, may be corrected by a later judgment. It may be subordinated to this later judgment, and overriden by it in a way which here I am unable to discuss. But can we say that every judgment remains standing until in this way it has been rectified explicitly? Such an assertion would assume that judgments once made remain always before me, and maintain themselves in living connexion with every later judgment. And this assumption would obviously be contrary to fact. In fact our past judgments may be wholly forgotten, and, where not forgotten, they may often be said to be unconsciously modified and altered, unknown to us, in order to suit our altered present. Subject to this limitation a judgment, once made, may perhaps be said to stand till corrected. But on the other hand we can maintain this only if we assume that a certain condition is satisfied. A past judgment holds not because once it was made, nor merely because it is not in actual conflict with our present. It holds because, and so far as,

[1] This is not the place to discuss this whole question, together with the special nature of theoretical satisfaction.

we assume identity between our present and our past, and because, and so far as, our past judgment was made from the basis and on the principle which stands at present. An assumption of the same kind, I may add, is all that justifies our belief in testimony, and, so far as you cannot infer in the witness a mental state essentially one with your own, his evidence for you has no logical worth. Another aspect of the principle which we have just been applying, is the doctrine that what has been once true is true always. Differences of time and of place do not count except so far as they themselves enter into the truth, or, again, the truth in its essence is unchanged however much places and times alter. This doctrine may wear even a more formidable shape, for it may insist that, whatever else in the world is or is not, any truth remains true. We have here to face the conclusion that all truth must be abstract, and to meet the doubt whether, if that is so, any genuine truth is possible. But once more this is no place for the discussion of such problems.

We may finally deal with the postulate as to memory's general correctness. This remains standing and valid although the infallibility of memory has been rejected as illusory. We are accustomed in practice to assume that memory is correct so far as we have no special reason for doubting it. And this assumption is rational, but it is not ultimate. Its warrant is that it enables us best to introduce order into our world, and to make our experience as a whole more concordant and inclusive. And, if so, our assumption's force is obviously derivative.[1] We may put this otherwise by saying that our assumption as to memory's general truth is based solely on experience. This assumption again can be confirmed from the psychical side. As far as we have reason to believe that the psychological conditions of correct memory were present, we have a reason for accepting its evidence as true. And such a belief for the most part and in general can be justified. But it is clear on all sides that we are not in possession here of any ultimate postulate.

I may now briefly resume the main results of this paper. My present judgment must be taken by me as infallible, and on the other hand memory cannot claim any independent or ultimate force. Any such claim, we saw, led inevitably to ruinous scepticism. The main difficulty in the case, we found, arises from a confusion between what I assert and my state as asserting it. My psychical state may be com-

[1] *Cf.* MIND, N.S., No. 30, p. 162.

plex and full of lapse and of dependency on something foreign. But none of these characters can be transferred to the judgment itself, and its independence and its unity remain unaffected. This suggested the doubt as to what in the end is the unity of a judgment, and we found an answer in the continuous and progressive development of the subject for me. Nothing can be dropped by the subject except what falls outside of and is incidental to the judgment's end. And we then went on to ask for the sense in which the subject must throughout be present to my mind, and were led here to offer some important distinctions. With regard to the duration of a judgment we allowed in principle no appeal to psychology, but we found it better for several reasons to limit that duration. We finally touched on the question how far a judgment once made remains standing, and stated the rational ground for our assumption that memory is in general correct.

## II.—RADICAL EMPIRICISM AND AGNOSTICISM.

By Alfred H. Lloyd.

In these days of empiricism, "revised" or "radical," of dynamic or experimental idealism or of pragmatism, now labouring so hard to determine or achieve its own real meaning, it seems well to undertake a flank movement, and instead of following the way of direct attack with studies of positive knowledge or positive experience, instead of merely making examinations of all sorts of conscious states and attitudes, to supplement such studies by giving attention to the inevitable negative in the case. Thus, what precisely can this new empiricism have to say to the position of the agnostic? Has the impossible any true place or worth in this theory of the possibilities of experience? Is there any substantial meaning left for the scientist's or the philosopher's or the theologian's Unknowable?

In another way, too, a flank movement seems worth while in the present struggles of pragmatism. Immanuel Kant once asked how experience was possible, and he gave of course an important answer, but the radical empiricist, or the pragmatist, has been giving what seems a distinctly different answer that possibly is not less important and that, in any event, in spite of its seeming opposition, may even be an outgrowth and an appreciation of the Kantian view; such has often been the humour of history. Moreover, the negative in the case interested Kant, whose philosophy dealt significantly with the possibility of ignorance as well as with that of knowledge, with the unknowable as well as the knowable. There must, then, be some promise of advantage in undertaking, not only to indicate the pragmatist's attitude toward agnosticism, but also to suggest some of the ways in which he may turn even Kantianism to his own peculiar purposes. The latter interest, it is true, is here to be an incidental rather than a primary one and it will receive little if any direct treatment, but it cannot fail to attract attention and to students of history it may even outweigh all other considerations.

Now there are various traditional sorts of agnosticism. To give at once a list of the more typical, there is, in the first place, the very extreme view that reality, as some sphere of existence quite outside of all knowledge, is thoroughly and essentially unknowable. In the lack of a better name this may be called absolute agnosticism. Then, secondly, there is the view that reality is unknowable to human minds but knowable to some mind or minds different from the human; and often, if not always, more or less closely associated with this there is, thirdly, the view that the knowable and the unknowable correspond, not merely to two different minds or natures, but also, although this involves very obvious difficulties, to two different faculties even of human nature, faith being, for example, one of the names applied to that with which men apprehend the unknowable. Of these two views, using familiar Kantian terms, the former I will call transcendent, and the latter transcendental agnosticism, although this application of the terms is open to some criticism. But, fourthly, the foregoing forms being distinctively metaphysical, there now comes to be counted the methodological and positivistic agnosticism of science, which either treats the unknowable as something quite impertinent to science's special business or takes it to be, the name 'unknowable' accordingly seeming too brutal, rather the infinitely distant yet-to-be-known. And, lastly, without being blind to the strangeness of the term or to the fact that I am leaving tradition behind, I mention empirical agnosticism, which, so it seems to me, has no choice but to treat the unknowable as just the reality, *the direct and immediate reality*, of positive experience. This, moreover, as I have to understand it, is the pragmatist's or radical empiricist's agnosticism, and although possibly to some it will sound hopelessly absurd, yet I shall do my best to make it intelligible.

So, to begin with, what objection is there, whether the pragmatist's or not, to those first four agnosticisms, which the pragmatist will be inferred to have rejected? The objection is fatal and is quickly told as follows: Whatever may prove to be true of the fourth, at least the first three views, called here the absolute, the transcendent and the transcendental, all very plainly share in a single logical fallacy. They misinterpret the limitations of knowledge, and the manifest negative that all positive, definitely formed knowledge must meet, to mean something that not merely in form but also in matter and essence is distinct and apart from knowledge, and while in the order given they do show a retreat from such a serious error they are never really freed from it. Even when

they do recognise, as in the postulate of the different mind or minds or of the different faculty, that an external unknowable must itself have at least a virtual or quasi knowability, they still fail to appreciate this fact fully. Not only is it logical—as well as humane?—to concede to their separate unknowable the right of being an object of interest at least to other minds, or in imagination even to one's own mind instead of leaving it, as those whom I have called the absolutists would leave it, quite unfriended and alone, but also perfect consistency calls for much more than this. Perfect consistency demands that any external unknowable, just because of its virtual or quasi or imaginary knowability, be taken really to mean that knowledge itself is always more than its forms or than any of its determinate faculties or that *in its own right* knowledge transcends its formal limitations. In short an external unknowable, having the right to enjoy the attention of another mind, or another faculty, is not and cannot be, when all is said, really and truly external, and the supposed other mind or faculty, therefore, can stand only for any mind's own native transcendence of whatever conditions determine its positive experiences.

When this is said, moreover, there at once arises the question of the real nature of the transcendence, since the consistency, which prompts the postulate of the other mind or faculty or of the quasi or imaginary knowledge may belong only within a formal logic instead of within a real logic. In fact, as will become more and more evident, the real logic of the transcendence, in place of finding just another mind or another knowledge, can recognise in such a finding only an innuendo for something which, though in knowledge and essential to it, is not formally in kind with it at all. Perhaps always another of anything, so necessary to formal logic, for real logic must mean the reality, even the immanent reality, of something different, but in any event an 'external unknowable,' because necessarily as if knowable to another mind, can be neither strictly external nor absolutely impossible to the knower; it may be beyond the given forms of his positive knowledge and so in this relative sense impossible, but immanent in knowledge it must be and *absolutely* impossible it cannot be. Too easily do we forget that negative terms are always only relatively significant.

All of which is doubtless very much of an old story, being little more than an expansion of the familiar criticism that the agnostic, who knows or who even only imagines a separate unknowable, is either too ignorant about himself or too wise about the unknowable. But now, what of that posi-

tivistic agnosticism of science, fourth in the list? This, as if in sympathy with the charge against the others, assumes the *essential* knowability of what is real but views reality as *practically* unknowable because the final and complete knowledge of it must be infinitely remote. So, at least theoretically, are the knowable and the unknowable brought together, while some meaning is still allowed the negative that separates them. Yet here also is an error of serious proportions, since the assumption is that infinity is at least formally possible, that is, though of course never actual, yet possible in kind with what is finite, and such an assumption, whether made with reference to infinite quantities or to infinite knowledge, is certain to obscure, if not hopelessly to distort, the true meaning of infinity. The infinite may indeed be in some genuine sense continuous with the finite, instead of external and aloof, and because continuous it may be also in some genuine sense possible to the finite, and so there may be in positivism some advantage over other forms of agnosticism; but, as before, it was important to determine the true nature of transcendence, so now is it important to find what the continuity and the possibility, which the positivist supposes, really represent. To interpret them literally, as the positivist commonly would, is to be as seriously at fault as to deny them altogether, for, once more and emphatically, the infinite, however truly continuous and possible, cannot be in kind with the finite. Its continuity and possibility, always only imaginary or "theoretical," can be but further evidence of the way in which a formal logic, that is to say, a logic bound to a single category or ἀρχή, both gives account of what is formally extraneous and at the same time admits this to its peculiar sphere. Even infinite knowledge, in other words, is like the external unknowable, since it cannot be mere knowledge; it is not formally in kind with knowledge; yet, as said to be continuous with knowledge and possible to it, it is really and actually always in knowledge and of it.

Perhaps this is not the place for any extended reflexion on the nature of infinity or of the continuity and the possibility with which infinity affects the finite. Two factors, however, in the nature of infinity must be pointed out, for they are necessary to any understanding of the matter now in hand. Infinity always involves (1) a real dichotomy, say quite abstractly of A and not-A, where A is any finite you please, or materially of A and B, where B names positively the whole class of things not A or any member of this class, and (2) a real immanence of either term of the dichotomy in the other. Very commonly the dichotomy here insisted

upon is overlooked, the infinite being taken as formal to, or with, the finite or as different from the finite only in degree, with the result that both the true import of the continuity is lost and, because formal identity must always make the infinite and the finite, as well as any two finites, quite impenetrable to each other, the immanence, in its turn may be not even suspected. The dichotomy, however, is essential; it is the very reality of the infinity,—and it therefore involves difference of form. It involves just the difference of form, or "kind," which makes possible, what formal identity prevents, namely, mutual penetration or immanence. Whence, really, the continuity means unity, but not formal unity, and the possibility, far from being the empty, only "theoretical" possibility of an absolutely superlative something which is formally in kind, is indicative of something at once immanent and actual but formally different.[1]

In a foregoing paragraph, in so far as it was shown that infinite knowledge, not being mere knowledge, not being just another knowledge, was really and actually always in knowledge and of it, an illustration of what has just been said is to be found, but an illustration, as helpful as it is simple, may be sought to advantage in a very different quarter. Thus, to tell again one of the old, old stories, although no line is ever conceivable as actually infinitely divided, some would-be inventive and original dissectors, entertaining the alluring dreams of the perfectionist, who is always formally bound in some particular way and thinks of the perfect and final accordingly, have presumed upon a line's infinite divisibility. Now, in the sense plainly intended, this is quite absurd. The last division which is thus supposed to be possible and as possible to produce results like in kind to those of all preceding divisions is rendered quite out of the question *just by the infinity.* The infinity puts the line wholly beyond the pale of mere division and stands, therefore, as a witness that the divisible line, just because actually divisible only finitely, is also actually something formally different, something more than divided or divisible, something more than a composition. Perhaps it makes the line a system as well as a composition; perhaps it even admits a dynamic reality to the space which

[1] Of course formal identity is a characteristic relation in what we call space. Things in space, in *any* space, are seen as formally identical, and also as thus in space they are external to each other, each having its own distinct and inviolable position or *locus.* At infinity, however, the *loci* of any space all merge into each other, immanence succeeding the original exclusion as the *transformation*, which the infinity requires, is effected.

the divisible line occupies so statically; but in any case it adds to the line's nature, or rather reveals in and of the line's nature something over and above mere composition or divisibility; something, indeed, which the division itself implies, this being the innuendo of the theoretical possibility of infinite division, but something at once present and actual and formally different, this being the point of the practical impossibility. In such wise, then, the line's infinite divisibility shows those two factors involved in all infinity, the dichotomy and the immanence; and, once more, as with the line, so with knowledge. Infinite knowledge, for real logic, must be something more than the merely remote yet-to-be-known, since it is formally different from knowledge, not formally identical, immanent, not external, and always present and actual, not just possible; and positivistic agnosticism, with its perfectionistic goal of infinite knowledge, is now seen to have been blinded by a conceit, more professionally scientific or epistemological than really logical, that knowledge as knowledge is its own reward or its own ideal or is, however incomplete or finite at any time, *essentially* final and self-sufficient.

And so, although at first thought it may have seemed as if the objection to the first three types of agnosticism, classed as metaphysical, would naturally be quite different from that to the fourth, which was epistemological, all four now appear guilty, in spite of their differences, of essentially one and the same error. In their several ways they all see what is not positively or formally in knowledge as throughout at least formally possible to knowledge; the metaphysicians, by holding to an external unknowable, whose bark—with all due apology for the flippancy—has been found here to be much worse than its bite, and the positivists, by treating the unknowable as only the infinitely remote yet-to-be-known. All four miss the true meaning, or a very important element in the true meaning, of the transcendence which the negative, inevitable to positive knowledge, testifies to. By treating knowledge as if it were an *ἀρχή*, by treating all things as known, knowable, unknown or unknowable, they fail to make the negative real and complete or to render the transcendence actual. By being formally gnostic even in their agnosticism, they just fall short of a real, a really open and honest agnosticism, cherishing an unknowable that is not unknowable enough and that before real logic is easily convicted of its false character.

But here a strange situation is forced upon the attention. While these four types of agnosticism are in reality using

knowledge as their *ἀρχή*, they are unanimous in their abuse of pragmatism, which treats experience, certainly a more general term, in the same way. "All is knowledge," imply the former; "All is experience," says the latter; and straightforward thinking cannot but wonder if it be not after all better to express openly than inaudibly to proclaim this intimacy whether of knowledge or experience with reality. But, whatever opinion may prevail on this point, two things are now plain; first, that while differences of word or phrase are often serviceable in controversy, especially when really empty negatives can be used as disguises, quite as often they only conceal identical intentions, and, second, that in view of the results of the foregoing exposure there is need of a more radical position in agnosticism. Manifestly, if the truly unknowable cannot be apart from knowledge and if infinite knowledge though "continuous" and "possible" with knowledge, cannot be knowledge and is truly unknowable, or again if one is forced to say with whatever apparent absurdity that knowledge—or experience—and reality are one, then agnosticism can find support, can recover its faith and its deity, only by turning directly to positive knowledge itself. Of course philosophy has always had and presumably it always will have its very grim humour, and just here and now it is telling us that in some way or other the knowable must be its own unknowable. The unknowable is dead, hopelessly dead and unreal, unless it can be resurrected in the knowable or in and of experience actual or possible.

Hence the name, empirical agnosticism, given above to the fifth sort of agnosticism. This empirical, also called radical or real, agnosticism is that which the radical empiricist, or the pragmatist, must and virtually does entertain. As already suggested, its unknowable is just the direct and immediate reality of positive experience. Kant would certainly turn in his grave could he learn of this novel empiricism, as agnostic as gnostic, with its immediately real experience and its accompanying unknowable knowable. Such a brutal slaying of his thing-in-itself would seem to him beyond all reason. His own *a priori*, however, has been the real destroyer. The form, or the law, is always brutal. In the development of the critical philosophy itself, the *a priori* first betrayed the unknowable thing in itself by making it noumenal, since what was beyond any possible knowledge had to be possible to a different kind of knowledge. And then the *a priori*, with a new violence, changed the noumenon into an object of the practical reason, making this object even internal, although still independent of the

formal reason. Simply, for reasons presented here, it kept overleaping its own limitations, constantly finding its own recognised unknowable to be knowable after all, and so in the end, as perhaps the chief point of the whole movement, revealing itself quite as much in the character of a function as in that of a structure, for the difference between the pure reason and the practical reason must be that of structure, the given formal conditions of experience, and function, the constant self-transcendence of the formal conditions. And so, finally, though Kant is long dead, his *a priori* has only been completing its work of destruction, making the knowable and the formally unknowable vitally and inseparably one, with a result to philosophy, that though unconventionally Kantian is nevertheless a Kantian product. In the language of the day this result has among other names the name of pragmatism. Thus, the thing in itself may have been slain, the Kantian *a priori* being function as well as structure,[1] but still it lives again in the immediate reality of experience.

The treatment of knowledge, or experience, as an ἀρχή is suggested, if not conclusively demonstrated, so far as Kant's peculiar agnosticism is concerned, in his very far from single-minded or univocal use of terms, of just such focal terms as *a priori*, experience (*Erfahrung*) and object (*Gegenstand*). How rich and various in meaning each one of these terms is! Nor is this circumstance to be taken as a ground of criticism; rather it implies appreciation; for in all vital thinking no important term can ever escape the conflict that has induced the thinking and also only by the various meanings of the terms can the merely formally logical ever be informed with the really logical. In the whole fabric of the Kantian philosophy is there anything that does not figure in some way as experience or as object? No commentator, so far as I know, has shown this rich versatility of Kant's vocabulary so well as Vaihinger. But what it all goes to show is that Kant, with his transcendentalism, phenomenalism, agnosticism and all, was only a pragmatist in disguise. Innocently, perhaps, or unwittingly, but really and truly, at least between its lines, Kantianism was pragmatism or, to say the least, it was exceedingly pragmatic. Knowledge, or experience, really was its ἀρχή.

To turn Kant into a pragmatist even in this qualified way, besides the possible shock to his present repose, will

[1] Or infinite as well as finite. Witness the antinomies.

doubtless seem to many almost if not quite irreverent. Flank movements, however, can spare no one. Moreover the case against—or for?—the critical philosophy is surely a strong one, for it does not by any means depend on the versatile vocabulary, and, too, something besides the character of the *a priori* as both functional and structural to experience can be given in evidence. In a word there is the great informing principle of the critical philosophy, namely: Whatever formally or materially makes experience possible is itself impossible to experience. The discovered conditions of knowledge, as abstracted, must each and every one transcend the possibility of formally being objects of knowledge. And this principle is quite as pragmatic as it is Kantian. Only Kant, generally evading the deep reality of the negative in the unknowable, so implied, rests in an untenable dualism of knowable and unknowable, and accordingly, to mention specifically one of the important results, makes knowledge's truth or validity depend *theoretically* either on an internal consistency or on conformity to what is quite external. *Practically*, however, as the antinomies always oppose formal consistency and the unknowable thing-in-itself prevents the conformity, actual knowledge is always hopelessly phenomenalistic, and so just by this thoroughgoing phenomenalism Kant may be said virtually, though not openly, to have abandoned the tests of either inner consistency or outer conformity. Practice, in short, leaves the theory without anything but a formality, or say rather a mediæval tradition, to rest upon. But why not at the start recognise the real instead of Kant's only formal unknowable and with the recognition escape the dualism, subjective consistency, objective conformity, phenomenalism and all? Why not honestly and openly take the unknowable, as quite immanent in the knowable, the practical reason in the theoretical reason, the will in the idea? After all has been said pro and con, the Kantian phenomenalism and agnosticism were only a *reductio ad absurdum*. Formal logic always end so. The Kantian unknowable, in fine, whether as thing-in-itself, as cause or as will, is really nothing more nor less than the knowable's own native realism; it is, again, neither more nor less than just the direct and immediate reality of positive experience.

Does not a great deal of the difficulty, whether with Kant's thinking or with that of many others, arise from a disposition to treat a whole as analogous to its parts? or, when not this directly, to do what amounts really to the same thing, to make of any whole a thing distinct and

different from its parts?[1] Whole and parts are certainly immediately real in and with and through each other and yet directly or indirectly they cannot be treated analogously; they are not amenable to the same category or *ἀρχή*. They differ *qualitatively*. They even occupy different "spaces". Are the parts knowable? Then the whole is unknowable. Is the whole knowable? Then the parts are unknowable. Of course the distinction between part and whole is closely related to that between finite and infinite, already mentioned and briefly discussed here, and of part and whole may be said what was said of finite and infinite. They are continuous with each other, but not formally. They are immanent in each other, not exclusive. Formally any whole may be larger than its parts, but this is not the final relation between them. Thus, to draw the application, if experience is the whole and subject or object of experience, condition of experience or cause of experience, is a part, then at once is involved a real distinction between what is possible and what is impossible to experience. This distinction, however, is plainly one of interchangeable terms, and, whatever the distribution of the terms, the direct reality of experience itself can hardly be said to have been impaired. Because a part is not the whole is no detriment to the reality of either. Again I do not wish to seem too flippant, but although hunger and food-on-the-shelf are not the eating and also significantly are quite inedible, yet the experience of eating, to which both contribute, formally or materially, is hardly rendered "phenomenal" by either their not eating or their inedibility.

So would I argue through Kantianism to pragmatism or radical empiricism. A real experience is its own unknowable and conversely its unknowable, extending to any part relatively to the whole or to the whole relatively to any part, is just the immanent and immediate reality of experience.

But such empiricism the casual observer is almost sure to charge with solipsism. Indeed the charge has already been brought, solipsism being openly proclaimed, for example, by one writer[2] to be "the logical issue of pragmatism". "Logical issues," however, may be, as in this case, only formally logical, not really so. Thus the pragmatist's empiricism is undoubtedly a form of subjectivism, but casual observer most assuredly is any one who finds the pragmatist's subject so simple in nature and life, so self-sufficient, so free

[1] That is, distinct and different only as any one part is so from any other.

[2] "The Logical Issue of Pragmatism," by Prof. John E. Russell, *The Philosophical Review*, November, 1906.

from what is unsettled or indeterminate and contentious, as ever to make his subjectivism solipsistic in the way intended. The pragmatist's subject may in a sense be shut up quite within itself but only in the unconfining way that, for example, denied openings of any sort to the microcosmic monads of Leibnitz. Not only is the pragmatist's lonely subject a subject of infinite possibilities but also just this infinity of possibilities gives to any actual expression, to any definite realisation, with which it may be identified, an equally real objective world. The pragmatist's subjectivism, in other words, is persistently and consistently informed with that distinction between part and whole, finite and infinite; it finds the definite always partial and as complex or inwardly contentious, as tentative or mediative, as partial; and in view of this finding or of that information, in view of the fact, worth reflecting upon, that a subject which has infinite possibilities or whose essential nature is, not to be, but to act, not to have, but to use, not to know, but to think, can never, in any definite act or possession or idea, be alone or lonely, the accusation that pragmatism makes its subject a hermit is decidedly without sense or appreciation.

Berkeley once showed space to be ideal or subjective, and in doing this he seemed to many to have passed irretrievably into a world only his own. But Berkeley certainly saved himself or rather he saved his philosophy from the offence of solipsism by also showing space to be, not simple and irreducible, not primary and formally homogeneous, but complex and derived, the product of the qualitatively different or, let me say, of the conflicting, contentious sensations of touch and vision, and he then showed his appreciation of such idealism or subjectivism by equating the reality, or *esse*, of things in space, not with *percipio* nor even *percipimus*, but with *percipi*. Such an equation, deeply logical, appreciative as it was of the fact that the complex or contentious can be only partial or that the subjective so conditioned can never be without relation to a real objective world, completely shut out the possibility of any self-sufficient consciousness; it made stability and finality as well as loneliness and exclusiveness quite foreign to any definite or positive idea; and, retaining the spirit of subjectivism even while it denied self-sufficiency to any subject's experience, to any positive experience, it gave the good bishop the opportunity which he at least was longing for, whatever may now interest his readers, of saying such things as follow. In the first place:[1] "How

[1] First Dialogue between Hylas and Philonous.

can that which is sensible be like that which is insensible? Can a real thing in itself invisible be like a colour, or a real thing which is not audible be like a sound? In a word can anything be like a sensation or idea but another sensation or idea?" Then, secondly, after thus removing the possibility of anything external to sensation:[1] "To me it is evident that sensible things cannot exist otherwise than in a mind or spirit. Whence I conclude not that they have no real existence, but that seeing they depend not on my thought and have an existence distinct from being perceived by me, *there must be some other mind wherein they exist.* As sure therefore as the sensible world really exists so sure is there an infinite omnipresent spirit which contains and supports it." And lastly:[2] "Men commonly believe that all things are known or perceived by God because they believe the being of a God; whereas I on the other side immediately and necessarily conclude the being of a God because all sensible things must be perceived by him". So Berkeley may have been a subjectivist, but he was hardly a solipsist.

And very much as with Berkeley, so with the pragmatist. The pragmatist's subjectivism, if I may so speak, is a subjectivism not less of the passive than of the active voice; a subjectivism, whose active voice immediately requires a passive voice, and requires this, not in spite of, but just because of its subjectivism. The physical scientist most surely does not impair the integrity of his materialism, or of his energism, by associating or even by equating action with reaction. The association, on the contrary, is what gives an unassailable reality to his matter or energy, saving it from a fatal confinement to anything local and temporal or to anything static and mechanical. Similarly, then, the pragmatist does not impair the integrity of his subjectivism, or better of his empiricism, a radical empiricism, by recognising the passive voice. The recognition only saves, not a reality apart from experience, conformity to which is the test of experience's realism, but the reality in and of experience. To every action, some reaction; to every subject, an object; to every idea, reality; and this, or those, exactly as to every part a whole or to every finite an infinity. Infinity is "reactive" or "objective" to the finite; it conserves the nature and the activity of the whole in which the finite is a part. The passive voice, accordingly, that gives an object to every subject or agent, simply marks the infinity of every action, or the activity of the infinite subject, and its

[1] Second Dialogue between Hylas and Philonous.
[2] *Ibid.*

recognition does no violence to empiricism, to a radical empiricism, because the infinite, though as formally different from the finite as the whole from the part, is still in a real way continuous with the finite and possible to, nay rather actual in and with it.

Wherefore, as was said, it may be formally logical to find solipsism the logical issue of pragmatism, but really it is illogical. Berkeley's passive voice, his *percipi* in place of *percipio*, for which the pragmatist, identifying experience with reality, certainly has a keen sense, if not always an open appreciation, is a conclusive answer to the charge. Moreover, inasmuch as, if I mistake not, the charge of solipsism must have reference to a self confined not within experience in general, but within some definite and positive experience, it is well worth while to observe that the distinction between the definite and the undefined, the particular and the general in experience is parallel, not to that between the personal and the social, but conversely to that between the social and the personal. History seems to testify, with support, too, from psychology and sociology, as well as in my view from real logic. that the individual subject personally is superior to form or law, to definition or structural limitation, while socially and only socially is he amenable to these, and if this testimony is conclusive, two things may be said with emphasis: Solipsism has no real ground to stand on and the pragmatist is the very last in the line of those who may be accused of even seeming to have taken, or to have tried to take, his stand there.[1]

But now, while solipsism is so far from the meaning, intended or implied, of pragmatism, discussion of the charge has given new character to the unknowable or at least has deepened the character already found here. Berkeley's passive voice, to refer once more to that, in connexion with his argument to an infinite mind, has plainly involved the same negative or transcendent condition *in* experience that was identified with the unknowable. *Esse* equated with *percipi* instead of with *percipio*, or say now with function instead of with structure, not only is an answer to any suspicion of solipsism but also has the same intent as the statement that

[1] In an article published some time ago, "The Personal and the Factional in the Life of Society," *The Journal of Philosophy, Psychology and Scientific Methods*, 22nd June, 1905, I have discussed at some length the point just referred to. I suggest here also that the distinction between function and structure is parallel to that between the personal and the social—or factional—or the general and the particular. Kant's philosophy, then, in the Pure Reason is characteristically for experience as social; in the Practical Reason, for experience as personal.

the unknowable is not something outside of knowledge, but is just the reality of knowledge. Or, again, the unknowable as a negative means only that, while formally no knowledge is immediately real, yet actually all knowledge is so. Formal knowledge by its definiteness and consequent complexity not only is never self-sufficient and implies relatively to its form an unknowable, but also, showing in fact what among other things the unknowable points to, is rather social or factional than personal.

So is the pragmatist's agnosticism, an immediately empirical agnosticism, now before us. Just his immediately real experience is his unknowable. The vital, present reality of the knowable is, with all due deference to Kant, the thing-in-itself. The distinction between knowable and unknowable, appearance and reality, is a true distinction, but is a distinction, not between things or spheres mutually exclusive, but between things mutually inclusive or immanent and continuous, being parallel to that between structure and function, part and whole, group (or faction) and individual. And I venture to believe that this outcome of my flank movement in the struggle with the meaning of pragmatism, particularly of its claim to realism, will prove serviceable. There remain, however, for consideration here two ways in which I should like to illustrate the conclusion that has been reached, the first having to do with the general formulation of knowledge in so-called theories and being therefore epistemological, and the second, with an important phase of the difference between structure and function and being like so much current pragmatism, largely psychological.

In the history of thought it has often been observed that the formulated theories have naturally fallen into pairs. These pairs, however, have been associated, not through any appearance of agreement and uniformity, but on the contrary through a very deep-lying difference and, in fact, so deep has the difference been, they have borne witness to a perennial issue, in a word to a seemingly insoluble conflict in all formal knowledge. Ethics, for example, has always had in some form or other both its idealism and its hedonism; biology, both its vitalism and its anti-vitalism; physics, both its dynamism and its mechanicalism; chemistry, both its energism and its atomism; and theology, to conclude what might be a much longer list, both its supernaturalism and its naturalism; and it seems quite safe to say that the opposition here indicated in so many ways will continue as long as knowledge and its formal theories have a place in human experience. But with what meaning? To what

purpose? To find the meaning or the purpose one must reflect, first, that at any time in the history of any department of knowledge man's real experience can never be narrowed to the formal theories of either side of the opposition but individually and socially is in the opposition itself or in the two formulations as maintaining the opposition; secondly, that the opposing formulations both as to form and as to matter are always fluent or unstable, being made so by the reality and activity of the opposition; and, thirdly, that the two formulations constantly correct and supplement each other, each overcoming the other's partiality, each realising what is formally impossible, that is, unknowable to the other, and each co-operating with the other in the constant realisation of experience. Of course, if one identifies experience with one of the formulations, confining it to what is only one of its parts or is only structural or is rather professional and social than vital and personal, it is bound to be seen as only mediately real and to be judged as phenomenal, because failing to conform to reality and to imply an external unknowable; but the identification is false. Real experience is functional as well as structural; it is always a conflict of structures, this being indeed one way of recognising its functional character; and, seen in this light, it has a direct reality of its own, being superior to any tests of outward conformity and by this superiority actually harbouring its own unknowable. By opposition, in other words, by its expression always in opposing formulations, each realising, as was said, the other's unknowable, human experience, at least so far as manifest in formal theory, has been natively real, real in and of itself.

Of the opposing formulations, furthermore, it is worth remarking that in all cases these imply the distinction between part and whole, or finite and infinite, and that their radical difference or opposition is an illustration of the fact, already indicated here, that part and whole, finite and infinite, can never be viewed under the same category or ἀρχή or—to employ what may or may not be only a metaphor—that they must always occupy different spaces. Also, however, it is important to add that the distinction between part and whole, or finite and infinite, being always relative to some assumed form, is in consequence always transposable. Whence just that follows, which in the history of theories has often been observed, that opposing formulations are only explicit renderings of each other's implications. Each one in any pair is but the day of the other's night. So, for example, have hedonism and rigorism, naturalism and super-

naturalism, individualism and socialism, materialism and idealism, always been related. In brief, the opponents truly are immanent in each other, very much in fact as the day and the night are so, and through their mutual immanence new meaning accrues to the suggestion, already made, that of any two opposing formulations either one takes care of what is naturally hidden to the other; either realises the other's unknowable. Could radical agnosticism ask for better support than this?

But, finally, there is the illustration from the field of psychology. In fact the translation of the distinction of knowable and unknowable into that of structure and function or again into that of experience in its social and communicable and in its characteristically individual or personal and incommunicable form is quite as significant psychologically as epistemologically. It has been said, probably more than once, that pragmatism is only philosophy gone mad over the psychological standpoint, and the standpoint of experimental psychology at that, but just in view of that I have resorted to my present flank movement, which so far can hardly be accused of being psychological either in standpoint or in presentation. At least not very often has psychology been defined as science of the unknown or unknowable nor even as science of ignorance or unconsciousness, nor does psychological experiment commonly approach experience from the rear. Now, however, that the rear approach has served to provide correction for possible error in the normally psychological view, it seems reasonably safe to turn to psychology.

Accordingly, again, the knowable and the unknowable correspond respectively to structure and function, as well as to part and whole or, in Berkeley's terms, to *percipio* and *percipi*.[1] Doubtless, as usually employed, the distinction between structure and function is more general than that between knowable and unknowable, but this only deepens its value here. Also, while logically structure and function count as two, and while with this counting experience is to be described as their *tertium quid*, psychologically they are so insistently intimate as hardly to be capable of enumeration, and nothing, I should say, is so essential to the understanding of the psychology of pragmatism as recognition of this great intimacy. Thus, the honestly pragmatic psychologist knows no better definition of psychology than this: "The study of

[1] Of course the verb in the active voice has a subject and this means that the activity is through the medium of some given structure. For the passive voice there is no such determined mediation.

the structure and function of human consciousness," and has no other meaning for the term experience save that of the vital intimacy of structure and function.

Now this union is such as to make all structures significantly subjective and to give to every subject or structure an objective world, the world, namely, of all those other structures, actual or possible, which on its side the function must always imply. Moreover, because every structure must be definite or finite and must imply a function in which the finiteness is transcended or by which, as it were, the given structure is informed with the dichotomy of its finite character, the subject and object must be organic to each other. Thus, there is a subject, if there is a structure, but there is no mere subject or no fixed subject, no subjective *status in quo;* there is, too, an object, as real as the subject, if there is a function, but there is no mere object, no objective *status in quo;* and subject and object, not only never do conform, but never will or can, and ever to imagine their conformity, whether in the real or in the ideal, is to fail wholly to appreciate either the logical or the psychological difference between subject and object, as well as to betray the vitality or the reality of experience.

Perhaps my interpretation here will seem extravagant and in particular will seem to overload the word function. Yet I believe it is not extravagant. Can function mean less than the universal or the infinite? And can the psychologist who employs the word to-day mean less than that the infinite is immanent in the finite, the object in the subject? In one way, it is true, this term in psychology, as in mathematics, is easily misunderstood. In mathematics a function implies a series, an infinite series, and, to revive the discussion of an earlier paragraph, the idea has been held that the series has a last term, never indeed actual, but possible, theoretically possible, and that as possible the last term is in form or kind with the other terms or that its difference from the other terms is only in degree. But the infinity, which is the sphere of the function and is certainly negative, even while possible and continuous, or is "objective" to the given finite form, base or structure of the series, can mean only that the function itself involves or contains something, that is, first, present and actual, not merely theoretically possible, and second, different, formally different. And, as in mathematics, so in psychology, function must stand for the reality of something which, though not formally in kind with the given subjective structure, and though consequently impossible, relatively impossible, to it, yet actually must always inform it. In psychology, in

short, as in other fields, definiteness must always imply inner difference and complexity, and relatively to any element or factor of this complexity, relatively to any term, under which a subject may be structurally defined, there will always be an objective world; but an objective world that is as organic to, or as immanent in, the subject as the whole to, or in, any of its parts.

So are structure and function only a special and a peculiarly significant way of recognising subject and object, and, as they involve a radical departure from the conventionally dualistic or parallelistic way of dealing with the subject-object relation, so also do they imply a new meaning for experience and its reality and a new ground, as I have tried to show, for agnosticism. If, also, as discussed here, whether logically or psychologically, whether with the aid of Kant and his *à priori* or without this aid, they bring pragmatism and any of those other isms in the train of pragmatism nearer to their real meaning, making them possibly a bit less pragmatic, something will have been gained.

## III.—PLATO'S PSYCHOLOGY IN ITS BEARING ON THE DEVELOPMENT OF WILL (II.).

By Mary Hay Wood.

[An attempt has been made in the first part of this essay to trace through its various stages or forms (εἴδη) the gradual development of the human soul, as indicated in the Platonic dialogues. The earliest, most inchoate, of these forms appeared as appetite, *i.e.* 'desire' (ἐπιθυμία) as yet undifferentiated into anything beyond mere animal craving. The next stage was found to be represented variously as θυμός, ἔρως, δόξα, each of which displayed an emotional character, so that the type of action resulting from such a mental state would appear as impulsive rather than rational. Such a condition, we saw, lacks balance and, whereas it owes any consistency or unity it may seem to possess to the limitations of habit and convention, its dangers, when free from such external constraint, are typified in the character of the 'tyrant'. How then, it must be asked, does the mind attain to a condition of real *self*-control? What is the determining force which makes of the Self a united and consistent whole?]

### Thought and Reason.

The clue to such a force is found in the power of abstraction. Just as the artist must abstract the essential features of his subject,[1] even to the extent of rejecting colour and selecting only form, before he can make his sketch in outline, and having thus reduced the whole to order can at his pleasure add colours in their due place, so with the power of abstraction in the soul. It implies, says Plato,[2] the resolute turning, in fact the forcible dragging away, as it were, of the eyes from the dazzling phenomena of the world with its

[1] *Cf. Rep.*, vi., 484 C; *Laws*, x., 903 D; and *Gorgias*, 503 E.

[2] *Rep.*, vii., 518 C; or again in *Rep.*, 519 A, it is the cutting off, as it were, of "leaden weights attached to the soul at birth".

never-ceasing change and movement, that the soul may commune with itself in the colourless inwardness of thought.[1]

This, then, is the nature of the "conversion" of which he speaks, and the difficulty it involves is not far to seek. The material on which abstraction has to work is due to the constant pre-occupation (ἔρως) with sight and sound and sense.[2] Indeed it was the business of education by means of art to foster and direct this activity, that it might find pleasure in all that the visible world presents. Art[3] itself is concerned with this same flux and variety, and therefore is of little avail to strengthen the abstractive power in the soul. So in the *Republic* the criticism of the first education includes this condemnation of art—*αἵ τε γὰρ τέχναι βάναυσοί που ἅπασαι ἔδοξαν εἶναι* (*Rep.*, 522 B). Some other means must be found to withdraw the mind[4] from such preoccupation,[5] to give leisure for reflexion, "bending it back" upon itself. For this is just where the true nature of the soul is displayed, it appears as "master of itself" in this process of self-examination.[6]

In order to find the appropriate nourishment[7] for the growth of this kind of activity Plato traces it back to its lowest manifestation, to its most elementary form (*τὸ φαῦλον τοῦτο*). And this he finds to be the power of *number*, of counting; for number implies difference[8] and so arouses wonder, and hence that questioning[9] which we saw to be characteristic of thought or reason. This power of calculation is just as characteristic of the inherent activity of soul as that of rhythmic movement or of appetite, and like these has means of nourishment appropriate to itself,[10] as well as its own peculiar pleasure (*ἡδονὰς οἰκείας*, *cf. Phil.*, 51 D). Such nourishment is supplied by what Plato calls the "study of the one" and its infinite divisibility,[11] or of arithmetic, the art of reckoning[12]; that is to say, arithmetic studied not in connexion with the concrete—money, for instance, *οὐκ ὠνῆς οὐδὲ πράσεως χάριν*, 525 C (this would be to return to the world of sense[13])—but as a purely abstract science, *ἀλλ' ἕως ἄν ἐπὶ θέαν τῆς τῶν ἀριθμῶν φύσεως ἀφίκωνται τῇ νοήσει αὐτῇ*—and as "the easiest way to pass" from the world of sense to the world of thought.[14]

[1] *Cf. Phædrus*, 247 C. [2] *Cf. Rep.*, iii., 401 C.
[3] *Philebus*, 58 E, 59 A. [4] *Cf. Phædo*, 64 E, 65 A. [5] *Ibid.*, 65 C.
[6] *Ibid.*, 94 C, D. *Cf. Theæt.*, 189 E, 190 A. *Cf.* also *Sophist*, 263 E.
[7] *Rep.*, vii., 522 B, C. [8] *Ibid.*, vii., 524 B. [9] *Ibid.*, 524 C.
[10] *Ibid.*, vii., 524 D. [11] *Ibid.*, vii., 525 A.
[12] *Ibid. Cf.* also *Laws*, v., 747 B. [13] *Laws*, v., 747 B continued.
[14] *Rep.*, 525 C.

Now this activity once aroused becomes a motive to itself, it becomes *actual*. From being a mere capacity of seeing unity in diversity (as in the *Phædrus*)[1] it develops into an active grasping at the truth (*ὀρέγηται τοῦ ὄντος*), and takes on the aspect of a passion[2] (*ἐπιθυμία* again). Reason, in fact, the full and final development of the soul's activity, is as the opening of an eye, revealing those hitherto dark and half-blind processes by means of which the development itself was taking place. These take on a new meaning, each having reference now not merely to a part but to the whole; *ἔρως* is no longer a passion for this or that object but for the truth. The very processes characteristic of desire,[3] *κένωσις* and *πλήρωσις*, directed originally to mere existence, life, are[4] now seen to point also to the "good life," the "true being" or reality of knowledge; and the pleasure corresponding to this enlightened and enhanced activity is characterised by a wholeness and completeness that gives it more reality (*βεβαίος τε καὶ καθαρὰ ἡδονή*[5]) Truth, in fact, is seen to be just this, the unifying principle that gives form to what was otherwise formless, simplicity to what was complex, wholeness to what was discrete. When the darkness and chaos of sensation yield to the twilight of opinion[6] it is to herald the gradual dawning of this sun that is to dispel the shadows and show reality in its true light.

This,[7] the source of light and existence in the world of thought, as the sun in the visible world, is called by Plato the "Idea of the Good"—*ἡ τοῦ ἀγαθοῦ ἰδέα*. For the[8] Good is for him just that harmony and simplicity which, as was said at the beginning, is the actual *φύσις* of the whole. The Greek word *ἰδέα* (it is perhaps hardly necessary to note) has a much looser meaning than the English word; it connotes classification, unification. The variety of its application can hardly be better illustrated than by the passage in the *Theætetus* where Plato uses *ἰδέα* of the mind itself.[9] Yet even there the word certainly seems to connote unity, the mind being that which unifies the multiplicity of sense. Again[10] *ἰδέα* is the essential or permanent element in each thing which makes it possible to compare and classify,[11] and so lies at the root of all thought and reason.

[1] *Phædrus*, 249 C.
[2] *Rep.*, v., 475 B. *Cf.* 485 B, and *Philebus*, 58 D.
[3] *Rep.*, ix., 585 A, B.
[4] *Ibid.*, 585 C, *πάσης ἀρετῆς*, and *cf.* bk. i., 353 E, 354 A, for *ἀρετή* as representing "good life".
[5] *Ibid.*, ix., 586 A. [6] *Ibid.*, v., 478 C. [7] *Ibid.*, vi., 508 C, E.
[8] *Cf. Philebus*, 65 A; and 66 A. [9] *Theæt.*, 184 D.
[10] *Parmenides*, 135 C. [11] *Ibid.*, 132 A.

This is the character of *ἰδέα* as, for instance, opposed to *αἴσθησις* or *δόξα*.[1] These (like the indistinguishable shapes of twilight) have no distinctive value, no common or absolute standard by which their relative positions are assigned. Hence it is that to those who live by opinion,[2] following "the many formulæ of the many men," the world lacks coherence, is a mere chance jumble of phenomena; in the half light, shadow and substance are confounded and there is no recognised pattern (*παράδειγμα*) of truth and reality.[3] Such have no permanence or certainty or consistency of character, they do not "know what they know" (*cf. Char.*, 167,, they take up a wrong opinion and mistake it for knowledge.[4] They are different persons at different times. So in Protagoras' supposed argument as stated by Socrates in the *Theætetus*[5] a man may be said to "know and not to know at the same time," and can scarcely be admitted to be "one at all and not rather many and infinite as the changes which take place in him". But once let him get a grip of reality and all falls into place—*i.e.*, let him get an insight into some underlying principle, even in his play[6] (as one might recognise the sun by seeing it reflected in water—*ἐν ὕδασι φαντάσματα αὐτοῦ*, *Rep.*, 516 B), and knowledge will become a real thing to him, he will begin to see the "whole" in the "all."[7] and so becoming truly *κόσμιος* and *συνοπτικός* (*Rep.*, 537 C) will be able to envisage "all time and all existence".[8] Thus the supreme *ἰδέα* or *εἶδος* is the ideal or perfect form of knowledge, which would render intelligible the whole of reality, as partial sciences render it already in part. Every possible perception, thought, feeling, motive would thus be reasonable, *i.e.* would be recognised for what it was, and so find its meaning in the whole. This is why *ἡ τοῦ ἀγαθοῦ ἰδέα* is conceived as the form of scientific knowledge, no less than as enlightening the individual reason. In the *Phædo*[9] Socrates finds fault with Anaxagoras and the physical philosophers for "handling things blindly, as if in the dark" (*ψηλαφῶντες ὥσπερ ἐν σκότει*), and it is just because they have missed this, the only true source of light. In the *Politicus*[10] the only efficient method of science is to proceed by *εἴδη*, by abstraction and reason; things of sense are in themselves an insufficient guide, for "the greatest and noblest truths have no outward

[1] *Thæt.*, 159 E, 160 A, 161 D. [2] *Rep.*, v., 479 A, D.
[3] *Ibid.*, vi., 484 C. [4] *Thæt.*, 194 B, 199 A. [5] *Ibid.*, 166 B.
[6] *Cf.* the recommendations in *Rep.*, 536 D and 537 C. *Cf.* also *Laws*, xii., 965 C.
[7] *Thæt.*, 204 B. *Cf.* also *Rep.*, 486 A. [8] *Rep.*, 486 A.
*Phædo*, 99 B, C. [10] *Politicus*, 285 A; *Philebus*, 16 C, also 16 B.

images of themselves visible to man".[1] Just so it is by means of this *ἰδέα* that a man is set above the petty rivalries and conceits of ordinary life [2] (expressed by such maxims as "every man for himself,"—*πάντων μέτρον ἄνθρωπος*, or *φίλος αὑτῷ πᾶς ἄνθρωπος φύσει*—see *Laws*, 731 E), through the perception of what is the common end of all, an absolute standard by which the value of each thing is determined, which therefore *makes it what it is*—gives it its essential nature.[3] This character appears in regard to every form of activity, whether it be displayed in the pursuit of the "necessary pleasures" [4] of appetite or in the guise of emotion or opinion.[5] Opinion for instance may be about what is to happen (*δόξαι μελλόντων*), so resolving itself into hope or fear, cheerful courage or blank despair. But in every case it is reason that gives the clue to truth, "judging which of them is better or worse," by reference to the standard which it alone possesses (*ἡ τοῦ μετρίου φύσις*).[6]

The notion of an absolute standard, a common law under which all phenomena are united Plato found, as we saw, first awakened by means of number. And a study of arithmetic and the other abstract sciences strengthens this capacity by [7] drawing the mind away from what is particular and variable to what is universal and permanent. This process of abstraction is figured as a constant dialogue of the mind with itself,[8] in which parts are being continually discriminated in a whole,[9] in fact he calls this activity dialectic [10] (a term connoting such a process), by whose consummation "the essence of each thing" and its place in the whole are conceived.[11] Only in so far as this is attained can a man be said, in Plato's phrase, to possess 'mind' (*νοῦς*). Unless he can distinguish the universal principle and hold to it through all that may beset him he has no grasp of reality, he is still in the land of shadows.

But this activity, whether it be called dialectic, reason, abstraction, or thought, was concerned, we saw, with the whole soul (*ξὺν ὅλῃ τῇ ψυχῇ περιακτέον εἶναι*, *Rep.*, 518 C).

[1] *Politicus*, 285 E, 286 A.

[2] So of the prisoner who had been released from the cave and had seen the light of the sun (*Rep.*, vii., 516 D), and *cf.* 586 B for the opposite state.

[3] *Rep.*, vii., 517 C.

[4] *E.g.* in the *Philebus*, 63 B, C, it is the presence of such "knowledge" that enables pleasures to be distinguished.

[5] *Laws*, i., 644 C, D.

[6] *Politicus*, 283 D, E, 284 A (where the existence of such a standard is asserted).

[7] *Rep.*, vii., 525 C. [8] *Sophist*, 263 E. [9] *Ibid.*, 253 D, 254 A.

[10] *Ibid.*, 253 D; *Rep.*, vii., 534 B. [11] *Rep.*, vii., 534 B.

It takes up the process of assimilation, no longer in a haphazard and groping fashion but as consciously aiming at a conceived perfection.[1] This is made evident in the language of the *Republic*. The "Idea" or Form of the Good is not only the standard of reason and thought but the aim of desire and of conduct.[2] It is of the nature of an end—self-sufficing and complete (*αὐτάρκης*)[3],—that perfection of its own nature at which every creature aims[4]—for "it is the nature of the soul's activity to desire the truth" (*πέφυκε τῆς ψυχῆς δύναμις ἐρᾶν τε τοῦ ἀληθοῦς*) and *to do everything for the sake of it* (*καὶ πάνθ' ἕνεκα τούτου πράττειν, Phil.*, 58 D), *i.e.* it is the *motive* of conduct, not a passive idea in the mind, but active, seeking realisation in act—as in the *Phædo* in the exercise of reason the soul is *grasping after* truth (*ὅταν ὀρέγηται τοῦ ὄντος, Phædo*, 65 C, and *cf. Rep.*, 485 D). The other and lower forms of psychical activity were also aiming at the realisation of *φύσις*, but as it were blindly groping after it in the dark. Now it is as though a man walking in his sleep should suddenly awake to the direction of his movements.[5] There is no more drifting when reason takes the helm (*νοῦς ψυχῆς κυβερνήτης, Phædrus*, 247 C).

## The Will.

It is in some such wholeness of mental activity, in that which is the expression of the whole self, that Plato finds the exercise of Will. In the *Gorgias* he states plainly enough that no basis for will is to be found in *δόξαι*, mere emotional impulses and impressions. Tyrants,[6] he says there, do what thus impresses them at the moment (*ὅ τι ἂν αὐτοῖς δόξῃ βέλτιστον εἶναι*), and yet their will is not concerned in it (*οὐδέν ὧν βούλονται*). In the *Republic*[7] there occurs an almost identical statement, *ἡ τυραννουμένη ἄρα ψυχὴ ἥκιστα ποιήσει ἃ ἂν βουληθῇ*, and, as in the *Gorgias* the condition is ascribed to absence of reason, *νοῦς*, so here it is due to a want of *wholeness* (*ὡς περὶ ὅλης εἰπεῖν ψυχῆς*). The tyrant stands for the mind that is not master of itself, but its own slave.[8] (The Greek phrases that correspond to these — *κρείττων ἑαυτοῦ, ἥττων ἑαυτοῦ*[9]—show more of the implied truth, since they possess also the meaning "better than oneself" and "worse than oneself"; that is to say, the way for a man to make the best of himself, to realise his own nature, is also that described as "self-mastery".)

[1] *Rep.*, 490 A, B. [2] So in *ibid.*, vii., 519 C.
[3] *Cf. Philebus*, 67 A, 60 C. [4] *Ibid.*, 22 B.
[5] *Cf. Politicus*, 277 D; *cf.* 278 E. [6] *Gorgias*, 466 D.
[7] *Rep.*, ix., 577 E. [8] *Ibid.*, ix., 577 D. [9] *Cf. ibid.*, iv., 431 A.

The contrast of slavery and freedom in regard to character and action is one that constantly recurs in the Platonic dialogues. So, for instance, virtue itself may be of a slavish kind (*i.e.*, if it lack thought, *φρόνησις*);[1] those who have no grasp of truth are accused of *ἀνελευθερία*,[2] and lawyers, as mere sharp men of the world, are, as compared to philosophers who strive after reality, *ὡς οἰκέται πρὸς ἐλευθέρους*.[3] In the *Laws* the statement is made that "to conquer oneself is the best of all victories, to be worsted by oneself the basest of all defeats".[4]

The fundamental difference between the two kinds of "defeat" or "victory,"[5] between the real freedom and the false, is put concisely in the *Republic*—it is the difference between being "king of oneself" and "tyrant of oneself".[6] The tyrannical man thinks himself free,[7] but in fact his nature is so chaotic and diverse (*ποικίλος*)[8] that he cannot be said to possess a self (*ἑαυτοῦ ὢν ἀκράτωρ*),[9] whereas the true or kingly ruler, while free from the claims of ambition, acknowledges himself the servant of the guiding principle or law.[10] A similar contrast is drawn out in book ix.[11] in regard to the "threefold creature," between the state of freedom which is licence and enmity, where the beasts are free to drag the man whither they will and all may "bite and devour each other," and the opposite, which is the reign of law and friendship. Here again the contrast is between variety and simplicity, the clash and chaos of anarchy and the simplicity and "continence" (*ἐγκράτεια*) of order, so that the one is seen to be the distortion and enslavement, the other the free development, of *φύσις*. Simplicity is, in fact, for Plato an equivalent of freedom—freedom from alloy and admixture, and so purity:[12] freedom from random and contradictory impulse, and so singleness[13] as of movement in a straight line[14]; yet directed by a necessity within, not by coercion from without.[15] Freedom[16] in this sense is the result always of some guiding principle or law

[1] *Phædo*, 69 B.
[2] *Cf. Rep.*, vi., 486 B, where the converse statement is made.
[3] *Theæt.*, 172 C, D, 173 A. *Cf.* also *Symp.*, 210 D.
[4] *Laws*, i., 626 E. [5] *Rep.*, iv., 430 E. [6] *Ibid.*, ix., 580 C.
[7] *Ibid.*, viii., 561 D. Though here he is still in the "democratic" stage.
[8] *Ibid.*, 561 E. [9] *Ibid.*, ix., 579 C. [10] *Ibid.*, vii., 540 D, E.
[11] *Ibid.*, ix., 589 A, B. *Cf.* for the first state the democratic city of *Rep.*, 562 E, 563 A, B.
[12] *Cf. Phædo*, 69 C.
[13] *Laws*, i., 635 D, *ἁπλῶς ἀνδρεῖοι καὶ ἐλευθέροι*; *cf. Rep.*, viii., 549 B, *εἰλικρινὴς πρὸς ἀρετήν*.
[14] *Theæt.*, 173 A. [15] *Rep.*, 540 D, E, *τούτῳ ὑπηρετοῦντες*.
[16] *Ibid.*, ix., 590 D. So in *Protagoras*, 326 D. *Cf. Theæt.*, 173 A.

(ἔχοντος ἐν αὑτῷ τὸ θεῖον ἄρχον), hence ἀνελευθερία is equivalent to ἀναρχία, "excess of freedom" issues in "excess of slavery".[1]

In order then that a mind may be free to will in any practical sense, it must have this character of simplicity, it must be directed as a whole towards the attainment of its object,[2] and this, Plato says, can only be when thought and reason are in the ascendant. The real end, all men agree, is the "Good," this it is which gives Form and wholeness. The intervening objects of endeavour, the means, τὰ μεταξύ, are, as it were, parts of the whole—its "content," and reason alone is the power of discrimination that can duly analyse the whole into its parts, and again give each part its place in the whole.[3] It is only through reason that the individual δόξαι,[4] resolutions to do this or that, can find the truth they aim at, and play their part in developing the scheme of the whole. "The prayer of a fool,"[5] says Plato, "is full of danger, being likely to end in the opposite of what he desires."

So, on the one hand, there is the assertion of the universal form of will, that all voluntary action is directed to the good[6]—and on the other, that actions are not in themselves good or bad,[7] but only according to that which directs them; and the co-ordination of these two statements seems to be this, that if the motive be the Idea of Good, only then will the means be rightly chosen; if not, the separate acts or resolutions have no standard to guide them,[8] and the life, aiming at no clear end, is the sport of chance.

So, to say that all men will the good, is only to say that all men have reason. The one as well as the other may be latent, inactive, and until the sun appears above the horizon —until the Good appears in consciousness—darkness, or at best twilight, will be the condition of the soul.[9] Such a consciousness of the end is reflexion—is self-knowledge,[10]

[1] *Rep.*, viii., 564 A. *Cf. Laws*, iii., 699 E.

[2] *Cf. Gorgias*, 507 D, πάντα εἰς τοῦτο τὰ αὑτοῦ συντείνοντα. So, in *Rep.*, ix., 582 D, the power of choice rests only with the mind guided by reason, since it alone has experience of a *complete* activity, and *cf.* above (B), ἔμπειρία ἀμφοτέρων.

[3] So in *Philebus*, 16 C, D, E. [4] *Cf. Theæt.*, 202 B, C.

[5] *Laws*, iii., 688 B. [6] *Meno*, 78 A; and in *Philebus*, 22 B.

[7] *Symposium*, 181 A; *Euthydemus*, 281 D, E.

[8] *Cf. Rep.*, vii., 519 C and 561 B, C (of the man who believes in no standard). So in *Philebus*, 30 D, 31 A, mind is of the nature of 'cause,' and so rules and guides; and above in 28 E, νοῦς is the source of order.

[9] *Cf.* the state of the day-dreamer described in *Rep.*, v., 458 A.

[10] *Cf. Philebus*, 48 C, 49 A—where the opposite condition is recognised as vicious.

since it involves recognition of the true aim of self. That is to say, it is as the self is known, is "mastered," in the whole and in detail, that will develops.[1] In the *Laws* Plato returns to this notion of self-mastery,[2] and illustrates, by a vivid simile, its relation to reason. Man is there conceived as a "puppet of the Gods,"[3] having "affections" in him, "like cords and strings which pull different and opposite ways and to opposite actions".[4] The "one among these cords that every man ought to grasp and never let go" is "the sacred and golden cord of reason"—"with this he must pull against all the rest," which are "hard and of iron".[5] Being thus softer than the rest the golden principle must "needs have ministers to help it in vanquishing the others". Here Plato clearly indicates that a condition of self-mastery is the result of a growth of mind, needing special conditions for its development,[6] and not to be looked for in the earlier stages; as also when he describes the drunkard who has no control of himself as "returning to the state of soul in which he was when a young child".[7] So, though no man is willingly bad,[8] or of his own accord injures[9] the self within him, yet on the other hand no man is good, realises and orders and organises his true self, *unconsciously*[10]—instinctively,[11] or by accident. Indeed, in the *Charmides*, Plato almost seems to allow the conclusion that *σωφροσύνη*, self-mastery, *is* self-knowledge. This word *σωφροσύνη* stands, perhaps, more than any other in the Platonic dialogues,[12] for the Good Will, the aspect of *φρόνησις* viewed from the side of desire and as displayed in conduct (so that as *ἔρως* is to *δόξα*, so is *σωφροσύνη* to *φρόνησις*). It is the law of the soul,[13] which it must follow just as the artist or craftsman must follow the law of his craft, but a law here became explicit, and so the source of all "reasonable" action[14]. *σωφροσύνη* is the *conscious* acceptance and preservation of that "normal" state in which emotion

[1] *Rep.*, iv., 442 C, D. *Cf.* below, 443 B. [2] *Laws*, i., 645 B.
[3] 644 E. *Cf.* also 803 C. [4] *Ibid.* [5] 645 A.
[6] *Cf. Rep.*, iv., 431 A, B; note the word *ἀκόλαστον* implying need of training or correction (*κόλασις*).
[7] *Laws*, i., 645 E.
[8] *Cf. ibid.*, v., 731 C, and ix., 860 D; *Protagoras*, 345 E.
[9] *Apology*, 25 D. [10] *Charmides*, 164 A.
[11] *Cf.* also *Laws*, iv., 710 A, where the 'vulgar' conception of *σωφροσύνη* is distinguished as having just this instinctive character.
[12] So in *Gorgias*, 504 B, it corresponds to *τάξις*, the 'scheme' or 'law' that governs a work of art.
[13] *Cf. ibid.*, 506 E, and above, 503 E.
[14] *Cf. ibid.*, 507 B, C. *Reasonable* because virtuous, *cf. Phædo*, 69 B.

and desire are subordinate[1]—conscious, *i.e.*, the mastery of self by self, "training and being trained by oneself," as Plato says in the *Timæus*.[2] Being thus the attainment of harmony in the self (*ξυμφωνία τινὶ καὶ ἁρμονία προσέοικε*, *Rep.*, 430 E), *σωφροσύνη* is always emphatically of the whole,[3] and answers to the exercise of reason.[4] But as reason and thought may be regarded specially as the organisation of *opinion*,[5] so may *σωφροσύνη* be looked upon as the appearance of the guiding principle in *ἔρως*[6] itself (*γεννήσας νοῦν*). The instinctive impulse of attraction to what seems beautiful becomes a conscious striving after an ideal perfection. As before, it is the enlightenment of the blind[7] impulses by the "Idea of the Good".[8] It is the wholeness and completeness of this, its self-sufficiency (*αὐτάρκεια*), that gives wholeness and completeness to the self through assimilation.[9] So the *φιλόσοφος* of *Republic*, 485 B, who is *σώφρων*, is at once a whole-hearted lover and a lover of the whole[10]—he loves the whole of truth (*πάσης ἀληθείας*), and his desires are wholly directed into this channel (*ὥσπερ ῥεῦμα ἐκεῖσε ἀπωχετευμένον*).[11] Desire in this final sense is not merely a general term for various kinds of mental activity, but expresses the fusing of the different forms into a whole. The pleasure which is the fulfilment of such desire is of a corresponding character. In the passage noted above[12] from the *Republic* (490 B) the realisation of self in the complete activity of reason is marked by cessation of pain (*γεννήσας νοῦν καὶ ἀλήθειαν . . . οὕτω λήγοι ὠδῖνος πρὶν δ' οὔ*). This is the same state that is described in the *Philebus*[13] as "a union of wisdom and pleasure"—there (where in the enumeration of the "finite, the infinite, the union of the two, and the cause of the union," it belongs to the third class) it is a "union of finite and infinite". Pleasure at last loses its "formless"[14] nature, and, being no longer partial but of the whole, comes to have a share in truth and reality. The statement is more fully explained later in the dialogue,[15] where the question is raised as to the kind of pleasure that is united to wisdom, and the answer given from both points of view is the same. Pleasure[16] demands some discriminating power, some criterion to assign its limits, and wisdom,[17] on the other hand,

[1] *Rep.*, iv., 430 E. [2] *Timæus*, 89 D. [3] *Rep.*, iv., 431 E. 432 A.
[4] *Laws*, iii., 693 C. [5] *Cf. Rep.*, vi., 508 D, and *Politicus*, 278 A.
[6] *Rep.*, iii., 403 A, 490 A, B. [7] *Ibid.*, vi., 484 C. *Cf.* also 506 C.
[8] *Ibid.*, vii., 540 A.
[9] *Cf. ibid.*, iii., 387 D. *ὁ τοιοῦτος μάλιστα αὐτὸς αὑτῷ αὐτάρκης.*
[10] *Ibid.*, vi., 485 B, D. [11] *Ibid.*, vi., 485 D continued.
[12] *Cf. ibid.*, 490 A. [13] *Philebus*, 27 D. [14] *Ibid.*, 31 A.
[15] *Phil.*, 61 C. [16] 63 B, C. [17] *Phil.*, 63 C; 64 A.

finds that it cannot co-exist with pleasures which are excessive—"very great and strong," *μέγισται καί σφοδρόταται*. In this mixture the essential character is truth, simplicity, measure,[1] the *reality* that corresponds only to reason. Without it there is chaos (*στάσις*), the form of the true nature is not discerned—the "good" that belongs to it (*τί ποτε ἔν τε ἀνθρώπῳ καὶ τῷ παντὶ πέφυκεν ἀγαθὸν καὶ τίνα ἰδέαν αὐτὴν εἶναί ποτε μαντευτέον*); the result is a "disorderly jumble disordering the possessor of it" (64 E), there is no self-knowledge. In the *Republic*[2] again reason is the only "instrument of judgment" (*δι' οὗ δεῖ ὀργάνου κρίνεσθαι*) by which pleasures are discriminated and a real power of choice is exercised; self-mastery implies a discrimination of all the various forms of self-activity.[3] And in the *Laws* too it is the yielding to pleasure that is described as the most conspicuous and shameful loss of will.[4]

We are thus brought back to the indissoluble relationship between *σωφροσύνη* and *φρόνησις*[5]—between conduct and reason, self-control and self-knowledge.[6] It is the sifting process of *νοῦς* at work on opinion that clears the "eye of the soul" to behold its own true image.[7] The appropriate emotion, when *θυμός* finds its place as the ally of reason, that marks this awakening, is shame, *αἰσχύνη*, *αἰδώς*, characteristic always of *σωφροσύνη* as modesty, moderation, and no less the companion of *φρόνησις*.[8] The opposite condition to *νοῦς*—*ἄνοια*—is for Plato closely akin to insanity.[9] Just as we should deny the possession of will[10] to a man of unsound mind, so would he to the man who is *ἄνους*—mindless, or *ἀμαθής*—ignorant. It is because of *ἀμαθία*, says Socrates in the *Protagoras*,[11] that a man loses control of himself; or again, as he says earlier in the dialogue,[12] it is through lack of knowledge that men err in that on which depends the whole conduct of life, *viz.* the choice of pleasures and pains. This somewhat crude statement, making wisdom a mere matter of "skilful weighing,"[13] reappears in a more serious

[1] *Cf.* below, 64 D. [2] *Rep.*, ix., 582 D. [3] *Ibid.*, 582 A-E.
[4] *Laws*, i., 633 E. [5] *Cf. ibid.*, iii., 693 C.
[6] *Rep.*, 586 D; and above, 583 B. These 'unreal' pleasures are *πληρώματα* of a partial activity, not of the *whole* self, so *ἄνευ λογισμοῦ τε καὶ νοῦ* (586 D), whereas *τῷ φιλοσόφῳ ἑπομένης ἀπάσης τῆς ψυχῆς . . .* E, and 591 B.
[7] *Sophist*, 230 C, D. *Cf. Rep.*, 527 D; and *Phædo*, 69 C, in all of which this conception of *κάθαρσις* occurs.
[8] Of the good steed in *Phædrus*, 253 D, E; of the 'wild beast' let loose, *Rep.*, ix., 571 C. *Cf.* also *Laws*, i., 647 D.
[9] *Timæus*, 86 B. [10] *Ibid.*, 72 A. [11] *Protagoras*, 358 C.
[12] 357 D; and above, 357 A. [13] *Cf. Protagoras*, 356 B.

form in the *Republic*, where the whole of life is seen to be actually a training of the power of choice, and all education directed to this end.[1] And elsewhere there occurs a further correction of this rough and ready notion of the *Protagoras*.[2] The knowledge required to keep a man straight (*εὐθῦναι, κατορθοῦν, cf. Prot.*, 326 D) is no mere cleverness, *δεινότης*, it is no mere acquisition of dexterity or skill. For, let the excellence of hand or weapon be what they will, the marksman's eye is the essential thing if he would find his aim;[3] he wills to accomplish this, but his will can only be effective in so far as these two, hand and eye, are in accord.[4] In this sense misconduct is always "aberration," ignorance means absence of will because absence of unity and organisation.[5] And yet there seems to be a possibility of some kind of mean state which may be a sort of ignorance and yet not actual *στάσις*. This is even suggested by a comparison of the "skilful weighing" of the *Protagoras* with the reasoned judgment of the *Republic*. The one is a result of experience and practice (*ἐμπειρία καὶ τριβή*), the sort of thing Plato would condemn as "false art,"[6] the other a matter of understanding and science (*ἐπιστήμη*).[7] Spurious arts arrive at their conclusions by a sort of "rule of thumb" or shrewd guess-work (*ταῖς τῆς στοχαστικῆς προσχρωμένους δυνάμεσιν*), and such is the "hit or miss" method of conduct, which without reasoned knowledge may sometimes nevertheless hit the mark.[8] In the *Sophist* precisely this condition is described, and distinguished,[9] as outward deformity and distortion (*ἀμετρία, αἶσχος*) from the inward state of disease (*νόσος*) and disintegration (*στάσις*). The latter alone is marked off as vice—*πονηρία*—and seems to answer to the "insane" condition that altogether lacks will, for the former is described as "aiming at a mark and failing to hit it"[10]; it has the appearance, at any rate, of a wholehearted though misdirected activity.[11] This, Plato says,[12] is "ignorance" which men "will not allow to be vice, *because existing only in the soul*".[13] The defect, that is to say, lies within; will[14] of this kind rests, by hypothesis, on no basis of reflection, no reference to an absolute standard (it

[1] *Rep.*, x., 618 B, C. [2] *Theætetus*, 176 B, C. [3] *Sophist*, 228 C.
[4] *Ibid.*, 228 D, *ψυχὴν ἀνόητον ἄμετρον θετέον.*
[5] *Cf. Rep.*, iv., 444 A, B, D.
[6] *Cf. Gorgias*, 465 A; whereas the true artist is described in 503 E.
[7] *Philebus*, 55 E. [8] *Cf. Sophist*, 228 C, D.
[9] *Ibid.*, 227 E; 228 A, C. [10] *Cf. ibid.*, 228 C. [11] *Ibid.*
[12] *Ibid.*, 228 E.
[13] Such at least is the meaning Jowett allows to the passage.
[14] *Cf. Rep.*, vi., 505 E.

is ἄμετρος).[1] It answers to what has been already called "associative knowledge" (p. 69); dependent entirely on the concrete—on its own individual experiences, necessarily so partial—and unable to reason from these to a general principle, it is constantly liable to error.[2] For this "empirical practice of the senses"[3] (*τὰς αἰσθήσεις καταμελετᾶν ἐμπειρία*) may work evil as well as good in the development of mind.[4] The fact on which it relies, *viz.* that all experience leaves its mark, may lead to such distortion of the soul's nature[5] as to destroy the very power of choice.[6] That this does not more often happen is due solely to the fact that the right kind of experience is supplied and leaves its own traces behind[7] (*παραδείγματα*).[8] By constant habituation (*εὐήθεια*[9]) even the blind hand may thus acquire skill to hit the mark. This kind of will then, if it can be called such, acts, as it were, from without, is in fact merely "social" (*δημοτικὴ ἀρετή*) —the reflexion in the individual of the will of the community.[10] It is the sort of will displayed by "bees or ants," not a distinctive capacity of human nature.[11] As such it has little of truth or stability; it must either degenerate or develop. So it is that Plato distinguishes within it a better and a worse.[12] The worse kind of *ἄγνοια*, he says, is that self-ignorance which mistakes itself for knowledge. This will easily develop into *στάσις* and *πονηρία*, for the man who thinks he knows will not hesitate to set himself up against the laws[13] "like a rival craftsman," committing so "the very worst kind of error"—*ἁμαρτήματος ἁμάρτημα πολλαπλάσιον*.[14] On the other hand, a consciousness of ignorance is, at once, an advance towards knowledge[15] —a first step on the way to the attainment of will[16] in the due co-ordination of means to ends. This must be aroused by free discussion, by a sifting of accepted

[1] *Sophist*, 228 D. [2] *Rep.*, ix., 584 E, and 586 A.
[3] *Philebus*, 55 E. [4] *Cf. Rep.*, iii., 409 A, B.
[5] *Rep.*, 409 B. *Cf. Laws*, v., 728 A, B, C; also *Theæt.*, 176 E, 177 A.
[6] *Cf. Theæt.*, 173 A (of those trained in the law courts), *τὸ ἐλεύθερον ἀφῆρηται, ἀναγκάζουσα πράττειν σκολία.*
[7] *Cf. Laws*, iii., 679 C. [8] 409 B.
[9] The accepted meaning of the word *εὐήθεια*, 'simplicity,' 'foolishness,' serves to bring out the antithesis between mere habit and reason.
[10] *Phædo*, 82 B. *Cf.* also *Rep.*, 619 C (of the man who chose the tyrant's lot).
[11] *Ibid.*, 82 B.
[12] *Sophist*, 229 C. *Cf. Laws*, 670 C; *Theætetus*, 176 D, 177 A.
[13] Like the *δημιουργός* of *Protagoras*, 327 C; compare the true craftsman of *Politicus*, 297 A.
[14] *Politicus*, 300 B. [15] *Apology*, 23 B.
[16] *Meno*, 84 B, C (the recognition of difficulty rouses will).

opinions and notions,[1] in fact by the process already described (see above, p. 203) as the only means of purging the "instrument of judgment". So reason is after all necessary to any *stable* development of will. Not only so, but in this intermediate and unstable state it is easy to recognise the characteristic features of *δόξα*.[2] That too was a kind of "aiming at a mark" (*τόξου βολή*),[3] but unenlightened and liable to error, emotional, swayed by pleasures and pains, a state characteristic of children and even animals (as here of "bees and ants"). As reason and thought correspond to real will, so the spurious kind of will is found to correspond to the spurious kind of thought.

Individual will seems in this conclusion required to transcend mere habit as enforced by the general will and expressed in law and custom. This gives to laws,[4] in their demand for unreasoning obedience, the aspect of cramping and hindering the free development of mental activity. And a certain truth is found to underlie this view. Laws purport to be of the nature of the changeless while they belong to the region of change. It is only the ideal itself that can possess this permanent character, and be in very truth and by its own nature (as *ἰδέα*) all-embracing;[5] it is this only by which every individual act could be recognised in its true meaning.[6] Law, in fact, as it deals with the world of changing phenomena, ought to be of the nature of an art, admitting a constant progress towards the realisation of an ideal;[7] only as such would it represent will guided by intelligence.[8] But this is almost incompatible[9] with the essential element of custom, by which alone its ascendancy has to be gained. Hence written law is inevitably a sort of compromise, and to follow it is, as Plato says, only "the second best way"—*δεύτερος πλοῦς*.[10] Its justification lies in the fact, so clearly and constantly affirmed by Plato, that only a few minds attain anything like a complete development.[11] Those few who do attain to an unclouded vision of the ideal use that as an unerring guide in all their actions,[12]

[1] *Cf. Theætetus*, 150 C.

[2] *Cf. ibid.*, 176 B (the motive of action is mere *δόξα*, appearance, *ἵνα μὴ κακὸς καὶ ἵνα ἀγαθὸς δοκῇ εἶναι*); also *Rep.*, vi., 505 D.

*Cratylus*, 420 C. [4] *Politicus*, 294 C. [5] *Rep.*, 517 C.

[6] *Cf.* also vi., 500 D. *Politicus*, 294 B. [7] *Cf. Politicus*, 297 A.

[8] *Ibid.*, *τὸ μετὰ νοῦ καὶ τέχνης δικαιότατον*.

[9] *Ibid.*, 300 E; *cf.* 299 C, D, *πατρία ἔθη*.

[10] *Ibid.*, 297 D, and below 300 B, C. *Cf.* also 299 E.

[11] *Cf. Phædrus*, 250 A, etc. See p. 63, note 8.

[12] *Rep.*, 540 A; *Politicus*, 300 C, D.

but to others it appears only in "copies";[1] not having a guiding principle within they must make shift to accept guidance from without,[2] which in time comes to leave its mark upon them[3] and so to furnish them with a secondary kind of self-guidance. This is the *δεύτερος πλοῦς* of that written and customary law which "it is within the power of any one who wishes to learn for himself".[4]

Yet here we discern a crux. Man is for Plato the outcome of society, no less than society of man.[5] How then, if the law represents only *δόξα* and *δημοτικὴ ἀρετή*, is there to be any development of that more complete activity which issues in reason and will? Law is the will of the community, and the will of the community makes the will of the individual.[6] The old difficulty has to be faced of the impossibility of an equation between whole and parts.

In the first place the very existence of law implies a certain stage of mental activity[7] and a stage which is itself transitional. The law-abiding mind has already emerged from the condition of *στάσις*. In that state there was no suggestion of order or harmony, no consistency—all was in such chaos that there was no possibility of receiving impression, of taking form from without, no capacity for friendship or social life.[8] Such a character is anti-social, essentially selfish and individualistic; being impervious to persuasion and opinion it cannot in any true sense form part of a community, and if present in it is a disintegrating element, a standing menace until it is either annihilated or reformed.[9] In the latter case there is developed, by the awakening of the latent receptivity of emotion, the sense of rhythm and order.[10] The mind becomes open to persuasion, receptive of impressions, and through sympathy grows to a sense of membership and community.[11] Whereas the lower nature was like a wild beast that could only be kept chained up,[12] this is like an animal whose intelligence can be tamed and trained to habits of obedience.[13]

[1] *Politicus*, 300 B, *μιμήματά τῆς ἀληθείας*. [2] *Rep.*, ix., 590 D.
[3] *Cf. ibid.*, 619 C, *ἕθει ἀρετὴν μετειληφότα*. This is why the lawgiver is *δημιουργὸς ἀρετῆς*, 500 D.
[4] *Politicus*, 299 C. [5] *Rep.*, viii., 544 D. *Cf.* vii., 520 A.
[6] So in the ironical description in bk. vi. of *Republic*, 492 B, C.
[7] *Cf. Politicus*, 309 A, *φύσεις . . ἱκανὰς . . δέξασθαι ξύμπαν τρόπον ἀλλήλας*.
[8] *Ibid.*, 308 E. *Cf.* also *Gorgias*, 507 E.
[9] *Cf. Laws*, ix., 862 C, E; *Politicus*, 308 E; *Sophist*, 229 A; *Gorgias*, 505 B.
[10] *Gorgias*, 506 E, 507 D. [11] *Rep.*, v., 462 B. [12] *Timaeus*, 70 E.
[13] *Rep.*, ix., 589 B. *Cf.* also bk. iv., 440 D.

This then is the state of δημοτικὴ ἀρετή, but it is itself transitory, tending always to develop or degenerate. This has already been recognised as its character, whether distinguished as δόξα or as the spurious kind of will; it is a stage of growth which has latent within it the germ, as it were, of the completer nature. That, Plato says emphatically, is never destroyed,[1] always present it makes itself felt in the transition which inevitably takes place (*Rep.*, 519 A) either as an increased sharpness and keenness in the region of associative knowledge[2] (ὀξέως διορᾷ ταῦτα ἐφ' ἃ τέτραπται) or[3] as a power of grasping the reality (τὰ ἀληθῆ) which gives to that its meaning.

To make clearer this process of development, as it takes place in the community, it may be viewed from another side, *viz.*, as the emergence of the idea (ἰδέα) of the Self and what it includes. The lowest or anti-social stage is like that of the third form of soul described in the *Timæus* (77 B)—στραφέντι αὐτῷ ἐν ἑαυτῷ τὴν μὲν ἔξωθεν ἀπωσαμένῳ κίνησιν, τῇ δὲ οἰκείᾳ χρησαμένῳ,—no claim is admitted from without, but[4] all is self, or taken to belong to it (οἰκεῖον, or rather ἴδιον). Hence there is no limit, no satisfaction for desire,[5] its character is πλεονεξία,[6] it is described as ἀπλησιστότατον.[7] On the entrance of order and a sense of measure there arises a recognition of part and whole—τὸ οἰκεῖον itself admits of this relationship—for if, when one member suffers, all the other members suffer with it,[8] what is another's is at the same time one's own and of the whole[9]; *cf. Rep.*, 463 B, 462 D, οὐ . . . τὸν μὲν οἰκεῖον ὡς ἑαυτοῦ νομίζει τε καὶ λέγει, τὸν δὲ ἀλλότριον ὡς οὐχ ἑαυτοῦ. Ἑνὸς πάσχοντος τῶν πολιτῶν ὁτιοῦν ἢ ἀγαθὸν ἢ κακόν, ἡ πόλις μάλιστα φήσει ἑαυτῆς εἶναι τὸ πάσχον. Self has now become a part of the body politic, with its own proper functions and limits; this is the condition of "social virtue". But then follows the further development.[10] It is not enough that this relationship should be blindly accepted, it must be recognised as the fulfilment, or tending towards the fulfilment, of the good of the self—its true nature. This is reflection, the "state built up within the soul" in correspondence with the whole in which it forms part.[11] Behind the law is now seen the will, the "law-giver,"[12] bending the individual wills to his own direction which is truly theirs. For the end is not such

[1] *Rep.*, vii., 518 E. [2] *Ibid.*, vii., 516 C. [3] *Ibid.*, 519 A, B.
[4] *Cf. ibid.*, v., 466 B, C. [5] *Gorgias*, 507 E. [6] *Ibid.*, 508 A.
[7] *Rep.*, iv., 442 A. [8] *Ibid.*, v., 464 B. [9] *Ibid.*, 464 A.
[10] *Politicus*, 301 E. [11] *Rep.*, x., 590 E, 591 A.
[12] *Ibid.*, vii., 519 E. (Adam prefers the reading νόμῳ to νομοθέτῃ, but accepts it as suggesting the ideal νομοθέτης.)

as to be one man's good as opposed to others'—any "good" which assumes this character is necessarily inadequate—produces *στάσις*[1]—it must be the same alike for ruler and for ruled, and such as to harmonise and give meaning to their several functions. So the self embraces again and in a new sense the whole. *τὸ ἴδιον* has grown to include *τὸ οἰκεῖον*, by a development corresponding to the three modes in which the general will is expressed, *φόβῳ καὶ νόμῳ καὶ τῷ ἀληθεῖ λόγῳ*.[2] If this true development does not take place, the true notion of self is warped and stunted, so as to clash with that of others (*ἀλλήλους ἀνταδικεῖν*),[3] the good of the self (*τὸ ἴδιον ἀγαθόν*) does not embrace the good of the whole (which should also be *τὸ οἰκεῖον*), so that a man "runs away from the law like a child from its father,"[4] and there is a return to *στάσις* (*οἰόμενοι τἀγαθὸν δεῖν ἁρπάζειν*).[5] All this serves to confirm the contention that the absolute rule of law is only second-best, and to show why Plato demands that there shall be rulers above the laws[6] who, having passed from the stage of accepting and following these copies of the truth[7] to the attainment of truth itself, may be able to return to them and give them a truer meaning for others.[8] For such ruling or law-giving would indeed become an art,[9] and so would lose its undesirable limitations. Under such conditions the law-abiding citizen, grasping in his turn the principles of the art, may develop into the law-making philosopher,[10] and in any case the tendency towards a true development, though it be slow to take effect, may at least save him from degenerating into a state of brutish stupidity or lawlessness.[11] While confirmed in virtuous habits he would not be without opportunity of being roused to an activity beyond this by having "characters put before him better than his own".[12] In such a community mental activity can freely develop; the harmony of such activity is secured by the harmony of the whole.[13] As in the web the warp and woof being closely interwoven correct each other's deficiencies, so the bolder natures learn gentleness and the

[1] *Cf. Rep.*, vii., 521 A; viii., 548 A, also v., 462 B, *ἡ δέ γε τῶν τοιούτων ἰδίωσις διαλύει*.

[2] *Cf. Laws*, vi., 783 A.

[3] *Theætetus*, 173 A, B. This is the condition called by Plato *σμικρολογία*, narrowness, inability to grasp the whole. *Cf. Rep.*, 486 A.

[4] *Cf. Rep.*, viii., 548 B. [5] *Cf. ibid.*, vii., 521 A. [6] *Politicus*, 309 C.

[7] So *ibid.*, 300 D. [8] *Rep.*, vii., 520 C. [9] *Politicus*, 300 C.

[10] *Ibid.*, 296 A, B. [11] *Ibid.*, 309 D, E.

[12] *Laws*, ii., 659 C. *Cf.* the whole passage 656-659; *Rep.*, vii., 521 A, for the kind of character he will have as an example or a "means of escape"; and *Theæt.*, 176 A.

[13] So in *Rep.*, iv., 443 C, the outward is only an image of the inward harmony; and in book vii., 540 B.

gentler ones boldness from their association in a community.[1] The individual is enabled to grasp the conception of a harmonious whole, and "setting his own house in order" (*τὰ οἰκεῖα εὖ θέμενος*) he in his turn serves, by his individual purposes displayed in the affairs of life, to strengthen by his own the general will.[2]

Some such solution as this seems to be given by Plato to the question as to the nature and freedom of the will, at least of the will in its normal scope and development. But the question naturally arises: given such direction as it would receive in the ideal community, is its development secure—is it then purely determined towards its own perfection? Plato's answer is in the negative. All natures do not start equally well equipped for the struggle (*τὸν ἀγῶνα τοῦτον*).[3] Like different "blocks of wax" some are finer, take deeper and more lasting impressions, than others—such minds are quick to learn and to remember, accurate and clear in their perceptions.[4] The opposite kind are slow, see and hear and think awry—*παρορῶσί τε καὶ παρακούουσι καὶ παρανοοῦσι*—and are constantly in error or ignorance.[5] So they start handicapped in the race of life, for the senses are the means of all knowledge.[6] Such minds have less capacity for development in any direction (*ἀσθενῆ δὲ φύσιν· μεγάλων οὔτε ἀγαθῶν οὔτε κακῶν αἰτίαν ποτὲ ἔσεσθαι*, *Rep.*, 491 E), whereas the well-endowed (*αἱ εὐφυέσταται*) require only suitable training to realise their inherent nature.[7] Hence it is easy to distinguish such a nature even in childhood,[8] nay in their very play children, Plato says, reveal their character and disposition.[9] Also he seems to note that even among the well-endowed natures there are inherent differences of taste and tendency, *e.g.* in the *Phædrus*,[10] where he ascribes differences of individuality to the guardian god assigned to each soul before birth, and again in the *Republic*[11] where each citizen is to serve the state by exercise of his own appropriate skill. The reverse of the *εὐφυής* are the natures that naturally lack balance (*ὥσπερ τὰ ἀνερμάτιστα πλοῖα*),[12] that run to excess, *πλημμελοῦσαι*;[13] in such, *φύσις*, the natural harmony, would seem to be not so much latent as actually lacking, so that no realisation of it is possible.[14] You

[1] *Politicus*, 309 B. [2] *Rep.*, iv., 443 D. *Cf.* also *Laws*, i., 645 A.
[3] *Cf. Gorgias*, 526 E. [4] *Theæt.*, 194 C, D. [5] *Ibid.*, 194 E, 195 A.
[6] *Cf. ibid.*, 186 C. [7] *Rep.*, vi., 491 E, 492 A; and *cf.* above, 486 D.
[8] *Ibid.*, vi., 486 B. [9] *Politicus*, 308 D. So in *Rep.*, iii., 413 C.
[10] *Phædrus*, 253 A. [11] *Rep.*, ii., 370 A, B; and in bk. vii., 519 E-520 A.
[12] *Theæt.*, 144 B. [13] *Rep.*, vi., 491 A.
[14] *Cf. ibid.*, vi., 496 A, and 486 B.

cannot give sight to blind eyes, Plato says, as some seem to think.[1] Such natures, he would say, being really "insane" (*μανικώτεροι, νοσώδεις*), should be restrained by force and so rendered harmless to the community.[2] Again these ignoble natures[3] (*νόθοι*, for they are not *γνήσιοι* (true-born)—not normal) are represented as maimed and deformed (*χωλοί*).[4] This defect is at bottom the same as *πλημμέλεια*—unevenness, lack of balance and consistency. And although in the passage just quoted the fault seems to lie in the lack of *θυμός*, "half-heartedness," yet it is after all chiefly reason, the power of abstraction, that is wanting. The "half-hearted" disposition is *φιλόθηρος, φιλογυμναστής* (*Rep.*, 535 D, 549 A), but not *φιλομαθής*, the abstract does not appeal to him, is not *οἰκεῖος*, does not correspond to anything within. He will be of those who at best attain a certain social excellence. For the mind can grow only by assimilation,[5] it is useless to try by mere force to put into it something alien to it—*ψυχῇ δὲ βίαιον οὐδὲν ἔμμονον μάθημα*.[6] This is one side of the truth: on the other hand the only *μάθησις* that is permanent is that which is ordered and enlightened by reason and truth (*μόνη γοῦν ἡ τοιαύτη μάθησις βέβαιος, Rep.*, 537 C), *i.e.* involves the *whole* mind,[7] and all these defects are only limitations, not abrogations, of the law that the direction in which education starts a man will determine his future life.[8]

Here are the two factors then that go to form the will—nature and training; failing these it remains unformed,[9] *κακὸς μὲν γὰρ ἑκὼν οὐδείς, διὰ δὲ πονηρὰν ἕξιν τινὰ τοῦ σώματος καὶ ἀπαίδευτον τροφὴν ὁ κακὸς γίγνεται κακός*—that is, if *both* fail; for there is always a something, or a possibility of something, miraculous—"divine"[10]—Plato seems to say, about the growth of harmony in the soul, so that it may even be conceived as developing *itself—αὐτοφυής*—without the otherwise so necessary aid of surroundings;[11] and on the other hand even in a nature where it is apparently non-existent it may at any time assert itself (*e.g.* under favourable conditions and training).[12] So in the *Timæus*[13] it is only by such assertion of its true nature (*θεῖον λεγόμενον ἡγεμονοῦν τε*, 41 C) that

[1] *Rep.*, vii., 518 C. [2] *Politicus*, 309 A. [3] *Cf. Rep.*, vi., 486 B, D.
[4] *Ibid.*, vii., 535 C, D. [5] *Cf. ibid.*, 486 D. [6] *Ibid.*, vii., 536 E.
[7] *Ibid.*, vii., 518 C. [8] *Ibid.*, iv., 425 B, C; *Laws*, vi., 765 E, 766 A.
[9] *Timæus*, 86 D, E, where see also Archer-Hind's note.
[10] So in *Rep.*, vi., 492 A, E.
[11] *Cf. ibid.*, vii., 520 B. Though this may, of course, be one of Plato's whimsical half-jesting paradoxes.
[12] *Cf. ibid.*, x., 611 E, where it is precisely philosophy that is able to produce the effect described in the passage noted below (p. 212, note 1).
[13] *Tim.*, 42 C.

even in the midst of transformation and degeneration the soul may escape from the downward course, *οὐ πρότερον λήξοι πρὶν τῇ ταὐτοῦ καὶ ὁμοίου περιόδῳ τῇ ἐν αὑτῷ ξυνεπισπόμενος . . . κ.τ.λ.*

If we seek a further reason for the *πονηρὰ ἕξις*, the defective nature of some souls, we find little enlightenment in the transmigration myths of the *Timæus*, *Phædrus* and *Republic*. In the soul as there depicted the defect seems to begin exactly where it ends, *viz.* in the will itself. In the *Timæus* [1] it is the souls of "those who are willing to follow after justice" that maintain their condition; in the *Phædrus* [2] "he follows who *will*"; and in the *Republic* [3] each soul is responsible for its own choice (*αἰτία ἑλομένου, θεὸς ἀναίτιος*). We must go beyond mere myth to get at Plato's true view.

In book iii. of the *Republic* he approaches the problem of heredity.[4] Children do not always, he says, resemble their parents; the "golden" race will sometimes produce "silver" and *vice versâ*,[5] nay, sometimes even "bronze" or "iron" natures spring from the gold. [6] Yet on the whole the rule holds good, that the nature of the parents is reproduced in the children. In book v.[7] the problem is fairly grappled with: if such care is taken in the breeding of dogs, birds and horses, why not in that of men? [8] So the law-giver will carefully choose the men and women who shall mate together, that, there being harmony and concord in their union (*ὁμοφυεῖς*), the offspring of it may be also of a harmonious and perfect nature (*εὐφυής*). Yet in book viii.[9] the problem is seen to be still unsolved: the laws that govern the growth and decay of human life are too deep to be fathomed by ordinary intelligence (*λογισμῷ μετ' αἰσθήσεως*), and so they will be transgressed, and the offspring of such mistaken unions will no longer be *εὐφυής*.[10] Still there is a law, a harmony or proportion, which, if followed, he seems to say, would produce always such results. So defective natures are to be regarded as truly abnormal, due to a transgression of the rule or 'norm'. In the *Politicus* [11] he returns to the question, and shows how it is just by the transgression of the law, by "following no one true principle," that the inharmonious natures are produced.[12] Like seeks like, following habit and custom instead of reason, and so from the union, *e.g.* of two natures in whom courage predominates, comes a progeny in which the excess of such character has blossomed into madness (*τελευτῶσα*

[1] *Tim.*, 41 C. [2] *Phædrus*, 247 A. [3] *Rep.*, x., 617 E.
[4] *Ibid.*, iii., 415 B. [5] *Ibid.*, iii., 415 B. [6] *Ibid.*, 415 A.
[7] *Ibid.*, v., 459 A. [8] 458 C. [9] *Rep.*, viii., 546 B, D.
[10] *Ibid.*, 546 D. [11] *Politicus*, 310 B. [12] *Ibid.*, 310 C.

ἐξανθεῖν παντάπασι μανίαις),[1] and in the case of the reverse character the opposite consequence ensues.

This law[2] then of the blending of opposites to produce a harmonious whole, the weaving of warp and woof into the even texture of the web, is seen to be the human or physical counterpart (ἀνθρώπινοι δεσμοί) of the "divine bond" (θεῖος δεσμός, *cf. Politicus*, 309 B) by which the statesman was to bind the community together (*cf.* p. 208-9). In either case it is an aspect of ἡ τοῦ ἀγαθοῦ ἰδέα.[3]

In a double sense therefore the will of the individual is seen to be the outcome of the will of the community, the soul owes not only παιδεία but ἕξις also to the society in which it forms part. In other words the εὐφυής, the harmonious nature, is itself the product of individual wills trained to act in harmony with the whole, and meeting with such training in its turn will so act as to produce similar natures, and so on in an endless progression.[4] Of what should be the starting point of the series, the actual origin, Plato, as we have seen, gives no account save in myths, where he attributes it to the action of a Divine Will (βούλησις) and Reason (διενοήθη δεῖν, *Tim.*, 39 E), a Will whose purpose and whose expression are the perfection of Beauty, Harmony and Truth.[5]

[1] *Politicus*, 310 D. [2] *Ibid.*, 309 B, 311 B.
[3] *Cf. Rep.*, vi., 505 A. [4] *Ibid.*, iv., 423 E, 424 A.
[5] *Cf. Tim.*, 29 E, 30 A, D, 92 C. So we are brought back to ἡ τοῦ ἀγαθοῦ ἰδέα which is represented by κάλλος ξυμμετρία καὶ ἀλήθεια (*Phil.*, 65 A), and is also (*Rep.*, 509 B, where *cf.* Adam's note) the First Principle of all existence.

(*Conclusion.*)

# IV.—ON THE SPHERE AND LIMIT OF THE ARISTOTELIAN LOGIC.

By K. J. Spalding.

The object of this paper is to throw some further light on the question as to the real relation between Aristotelian and modern logic. There is, I think, something peculiarly paradoxical in the discussion which this question has involved. For while logic appears to be essentially the study of the form or forms which knowledge must assume, this discussion, by resolving itself ultimately into a dispute as to what constitutes a form, has shown that logic is uncertain of its own assumptions. Modern logicians have been accused of "epistemology"; Aristotelians of admiring the works of Dædalus. The dispute, I believe, can be settled only by exhibiting more definitely than has hitherto been done what is the actual nature of the basis or bases on which, whether by Aristotle or Lotze, logic has been built. If only it were found that those bases were not identical, it would be possible to show that, as in mathematics from various axiomatic relations various and yet compatible conclusions hold true, so in logic doctrines which at the present moment seem at variance are in fact at once compatible with each other and necessary in themselves.

The inquiry suggests in consequence two main problems. For as the dispute lies between the Aristotelian and the modern logician its success must depend upon the discovery of two distinguishable bases demonstrably able to develop the features of either. I intend to confine myself here to the Aristotelian logic; and as my views on this subject are closely bound up with an analysis of class concepts which I found myself in the course of the inquiry compelled to adopt I will begin with the discussion of this.

If we turn to any individual within reality we may find it under a double aspect. For in itself it confronts attention as exclusive and unique; each character, each change of character, is fundamental and necessary to the individuality

which it is. But if it enter a class it is singularly transformed; it has become a mere dependant of a second whole, and of a whole too which contradicts the continued self-dependence of its member. It is plain that we cannot even say of Socrates that he is a man without *ipso facto* transforming Socrates in a manner quite comparable (though I do not say identical) with that in which, by relating an equal quantity B to a relatively self-dependent quantity A we transform that A in such a way as to make its self-dependence inconsistent with its later state. But there is thus an ultimate distinction between two individuals—however much they may resemble each other—and the same two individuals *qua* members of a class. The first remain as individuals external to each other and involve in relativity—in comparison for instance—no loss of their uniqueness; such relativity indeed might rather be shown, by opposing them, to emphasise their externality. But as two members of a class their real uniqueness vanishes and they remain opposed no longer. Their former opposition—of likeness no less than of unlikeness—is taken up into a notion which absorbs them both. Their identities indeed are not submerged; their absolute distinctness is not annihilated; but they are no longer independent—no longer wholes. Half enigmatically they stand as mere equivalents within a second and more complex whole; they have become, if I may say so, the sides of a tautologous equation, and the new whole is no longer an individual but the equation itself. I do not mean that its terms are therefore numbers; they may of course be counted, but this is no more their principle than counting is the principle of the equality of A and B. Quite evidently —though number like class creates a complex whole—number, in its inability to originate the Aristotelian predicables or any of the metamorphoses which on reaching class an individual inevitably undergoes, is unable to constitute generic wholes.

I shall try to show later that this simple consideration possesses important bearings on Aristotelian logic. In the meanwhile it is necessary to continue the development of class concepts on this basis. The new whole which has thus been born into reality is incapable of finite determination. Rising through individuals which transform themselves in it, it has no terminus of individuals and so becomes a complex able in its possible infinity of members to absorb indefinitely any newly noticed individual. It is therefore in this character that classes differ most essentially from those wholes of true relation with which, as having members, they

may otherwise be compared. A system of equality contains a limit which is of right its own; a class-system in possessing no such limit entails potential members not merely as possibilities outside it but inherently within itself.

Classes have thus originated as complex individuals of a special type; and being so far individual they enter by the same process—as simple individuals before them entered—into an indeterminable *generic* whole which now destroys them as *specific* individualities. Hence in the same way in which Socrates by becoming man acquired attributes, the conditions of which as merely individual he could not satisfy, so in becoming animal his attributes as man have been once more modified and reinterpreted. The process might be infinite but that reality is for this purpose finite. The nature of the *summum genus* is thus relatively the same as that of the *infimæ species*. It is the unity of a theoretically indefinite manifold; and this manifold stands to it as its terms.

The merely formal classification which has now been reached is just in so far logical as it may stand true (though it need not of course be the whole truth) of any concrete classification which we care to take. Any developments in consequence to which it may be further subject will be similarly logical. And that such developments actually offer themselves is immediately evident; for if we attach any meaning whatever to the vertical and horizontal lines which figure in a classification that meaning must construe them into copulas of propositions. But the propositions therefore which result involve the very consequences which have been developed; they constitute real systems in which subjects, whether individuals or classes, are shown lapsing within higher wholes. Thus to put the matter into other words, classificatory schemes are themselves products of propositions. Further, the antitheses which we have observed in the formation of a classification involve the presence within its structure of negative relations; while these become particular whenever, in the sphere beyond the singular individual, the subject is regarded as less than the whole species. It is evident that these formal developments of classification are identical with those of the Aristotelian propositions A, E, I, and O. Of the orthodox analyses of these propositions I shall speak later. But if in the meanwhile we take one further instance of the development of these relations of species to genera, we shall perceive the relevance of the Aristotelian rule concerning conversion *per accidens*. According to that rule an A proposition is not simply convertible; and the rule is

necessary, because a genus must obviously possess more than a single species. The further propositional developments involved by formal classification are on the whole so precisely comparable in structure with Aristotelian developments that they need not be continued here. I only refer in illustration to the doctrines of opposition and immediate inference. However different be the orthodox interpretation of the Aristotelian subjects and predicates the actual developments of these are immediately derivable from propositions creative of a classificatory system of genera and species.

The study of class with which this discussion opened has thus become, as the study of the elements of propositions, a logical doctrine of *terms*. From the other side of proposition may be similarly developed classificatory *inference*. The actual construction of these inferences makes it again evident that these are Aristotelian. The exceedingly complex developments of syllogism arise indeed in the most inevitable manner from the relations which exist—as a single glance of the eye will assure us—between the members set down in any scheme of classification. The possibility of the inference arises, as it arises elsewhere, from the fact that the system admits of the formation, through premises, of a complex system, which, though formed, is not at the same time wholly analysed by the premises. Thus it is evident that the premises of the first figure set up a relation between a *summum genus* and a species through a genus; those of the second between two species through a genus—whence it is clear why only negative conclusions can be reached; those of the third between two genera through a species—whence it is clear why only particular conclusions can be reached. Still further evidence might be derived by considering the rules of the syllogism whether general or special; for their infringement, in involving the destruction of the above systems, involves thereby the destruction of the conditions upon which generic judgments can alone exist as premises.

Leaving, however, the explicit development of this, I will only note in passing that there exist further developments not thoroughly elaborated by the Aristotelian logic which involve important modifications in the syllogism. In particular I would mention the existence of two different kinds of particular proposition; for if we predicate a genus of a part of a species the relation is not identical with that involved in our predicating of a species a part of a genus. These developments are important; but they are perhaps not wholly vital to the present discussion. The discrepant interpretation, on the other hand, already noted, of the

subjects and predicates of the logic of classification and of that of Aristotle calls for more immediate notice; and I will therefore continue the development of formal classification from a somewhat different point of view in order to lead on to this.

If we consider the nature of classification it appears to have evident bearings on what may be regarded as the particular problem of philosophy. The problem to which I allude is the exhibition of the world's individuals as falling into system, a problem whose difficulty is, in consequence, the existence in the world of antitheses and oppositions. Now presocratic philosophy, originating with monistic systems, passed over, in such pluralistic interpretations as those of Empedocles and Democritus, to the re-emphasis of the antitheses which had made of monism a mere abstraction. But with the Socratic schools, and more especially with Plato, the defeat of monism was definitely arrested by the conception —hitherto undreamed of—of the reality of the non-corporeal (*cf.* Zeller, *Presocratic Philosophy;* Burnet, *Early Greek Philosophy*),—of "ideas" which seemed at once to combine being and becoming, one and many. Now the ideas involved are fundamentally generic, and the dialectic in particular is a process of classification. This also seems explicable. For on the one side classification reduces many individuals to a unity which is above them, and on the other it does so, as has already appeared, by overcoming oppositions. And that this system was in fact the discovery of Socratic philosophy seems historically certain. For Plato, in a late work, speaks of it very definitely as "a gift of heaven tossed among men by the hand of a new Prometheus" (*Phil.* 16). We hear too that Athens rang with it, and that it was called the pearl of philosophy. In one passage it is so clearly described that it is perhaps worth reproducing: "And the precise question," says Socrates in the *Philebus* (16, *v.* Jowett), "to which the previous discussion requires an answer is how they are one and also many and not at once infinite, and what number of species is to be assigned to them before we allow them to drop into infinity". But if a process such as this was dialectic then, in requiring not merely genera but also species, it was pre-eminently classification, and any category of philosophic moment then developed would inevitably be introduced into it. Symmetry indeed, and with it one of the most characteristic of Greek notions, it evidently offers; and that it could become in consequence the foundation of teleological and other categories seems highly natural. Moreover

it is, I think, only in so far as the Platonic theory of ideas did not (owing it may be to the opposition to the mere corporeal out of which it arose) admit perception, infinity into its scheme, that the ultimate difficulties of philosophy arose for it in turn in the distinction between the ὄντως ὄν and the μὴ ὄν, between εἶδος and ὕλη. The unity which is formally involved in classification suffered in this way a remarkable disruption, with the necessary consequence of a double fissure. For, not to insist on what is well known, it is evident upon this merely formal ground that the ideas could no longer logically particularise themselves, while the particulars, unable to unify themselves, became irrational. The monism of Plato therefore involved, through a breach in a classification, an actual dualism. Nevertheless it did not happen to Aristotle to suppress the antithesis. For owing to the fact that on the view of genera as ultimate expressions of reality singular individuals, which as mere particulars lie outside them, infallibly obtrude themselves it is evident that he could not. He made the antithesis on the contrary the more penetrating in supposing that everything partook of matter as of form; and thus, while with the teleology of Aristotle what might be called the vitality of classification reaches its extreme, the non-classificatory character of matter still remains a factor in what is otherwise a classification freed from the Platonic fissure. Classification, therefore, thus interpreted and exalted by the teleological and causal categories attributed to it, was, as handed down by the Stoics and their successors, the inevitable legacy of ancient philosophy to the middle ages; and the triumphant acceptance, during the thirteenth century, of Aristotelianism as thus interpreted affords valuable evidence of its true spirit. The system was in fact eminently suited to the transcendental meditations of Scholasticism; for God, considered dogmatically as the cause and end of all things—as "id quo majus cogitari nequit," assumed a natural position in a system where some such position had to be filled; and not less perhaps was it so, that Scholasticism seemed to possess in the theory of the inferiority of perception a theoretical ground for its poor conception of this present world. Hence under whatever guise the mediæval systems actually declare themselves, their ultimately classificatory character is revealed in their discussion of Aristotelian questions by means of Aristotelian categories.

The formal basis of philosophy was thus, up to the end of Scholasticism, classification. For its ideals were consciously generic, and, what is more significant, its difficulties seem logically to originate from its actual interpretation of

this system. It follows, therefore, from the ability of classification, which we have already seen, to develop a formal system of its own, that the logical activities of ancient and mediæval philosophy must themselves have been developing this very basis. The difference in consequence between its system and the Aristotelian must be discoverable *within* it. I believe that it may be discovered and thence entirely evolved from a discrepant view as to the nature of generic attribution, which I will now attempt to explain.

Attributes, as we have seen, may be substantive or classificatory. For there are attributes, such as those of sense, which originate independently of generic structure. There must be, for instance, a first experience of colour or of sound, and these in consequence, though they can admit, do not involve a necessary relation to or dependence on a class. And there are attributes which originate and exist in class alone. Such are all generic attributes as "human," "animal". These therefore can belong to the terms or members of a class *alone* and never to pure individuals—to Socrates as man or animal, but not to Socrates as Socrates. As the attribute of equality in A involves that of equality in B, so "humanity" or "animality" look for and involve their own whole "man" or "animal," and out of these can have no rational existence. Yet, in the absence from the Aristotelian logic of this distinction, they fall into the individual,—into Socrates as Socrates, into A as A.

It follows that generic substance—for we may call that substance which is the ground of a real, though infinite, whole—falls away in the guise of a mere attribute into a now contradictory because isolated individual. And falling there it originates a well-known problem. By the hypothesis of realism reality lies in the One, which is the genus. How then can the genus ever manifest itself in the form of an infinite series of independent individualities? The individual is in this connexion so necessarily unintelligible that it has to be solved, as in the argument of Thomas, by an appeal to matter; and it thereupon involves the conflict of the *Principium Individuationis*. And secondly, as the generic substance lies confused and distorted within the substantiality of the individual, so its attributes lie confused with the true attributes of the individual. As therefore the substance of the individual was previously proclaimed irrational, so now are its peculiar attributes. In the mingling, within one, of two utterly diverse substances the individual has thus been completely dissipated. And yet it is within the individual that the two substances have fallen; and it is by the very

ideas that the individual has adopted that the individual is now also destroyed. Inevitably, therefore, nominalism had the laugh over realism, and yet for all that the truth remains that neither nominalism nor realism were ever able to make sense of a conception which has thrown into a common heap of contradiction the elements at once of individuals and classes.

The class has thus been superseded by a contradictory individual. But its development has consequently to be carried on by means of these very individuals. For the confusion which has presented individuals with attributes inconsistent with this aspect of their individuality, is compelled to continue its analysis with a denotation of these individuals. The denotation of Scholastic logic is not the denotation of dependent terms,—of A and B as held within their system of equality, to use a former comparison; it is a denotation of pure individuals,—of A and B as juxtaposed. Hence it is incapable of constituting class; it constitutes a different whole, the whole of an indefinite number $x$. Hence —equally external to this denotation—the attributes of individuals already criticised now reappear under the name of connotation, and that antithesis has arisen on which henceforward logic has to operate. Thus, in the first place, arises the difficulty as to the relative importance of connotation and denotation. For the denotation, in restoring the numerical aspect which was lost in the merely attributive interpretation of the class's individuals, seems to lie nearer to the essential character of class as infinite; yet void of any but numerical attributes, its importance seems once more to vanish and to give priority to the connotation without which, as their principle of differentiation, all classes would merge together in undifferentiated number. And, secondly, a difficulty arises touching their relation. For connotation, regarded as the totality of individual attributes, becomes involved with essence which, by hypothesis, is limited to the generic attributes. This conflict, as being the same (though applied now simultaneously to many individuals) which we have seen issuing already, in a single individual, between its so-called generic and accidental attributes, can have but the same issue which it had there; and hence the identification of connotation with essence is logically involved. In the absence therefore of any dispute as to the successive increases or decreases of denotation, there buds from the very root of realism the doctrine of the inverse ratio of connotation and denotation. In virtue of this identification however the question once more arises: How is the non-essential connotation to be apprehended?

From the individual it was shorn away. From the genus also it was shorn away. But this abstraction is nevertheless too violent to be maintained, and while therefore the theory of the attributive emptiness of the individual is preserved the connotative emptiness of the genus is rejected. For in the alarm occasioned by the spectacle of genera becoming continuously more vapid the Aristotelian logician (however the practice of Aristotle may be defended) has declared the species to be a form more essential than the genus. The rational has thus passed over into the irrational, and differentiæ which, being ultimately generic or specific attributes, must fail in turn, become the bases of a second yet equally inconsistent theory of the rational.

But if the imperfection of the traditional analysis of class concepts be admitted, it is evident that no satisfactory results can issue from its doctrines of proposition and syllogism. On the contrary it is inevitable that the theory of proposition should have divided itself into two streams of connotation and denotation, and that this divergence should have spread to the syllogism. For the recognition of the essential connotation as lying within singular individuals naturally explains the origin of the notion that a proposition is a relation of mere attributes—a doctrine which is developed and finds its culmination in the theory of proposition as of two ideas. And on the other hand exclusive recognition of the denotation of a class involves the converse theory of proposition as the inclusion of a subject in a class; and this theory in its turn find its development and culmination in the quantification of the predicate and mathematical logic. The weakness in the theory of the proposition which both theories necessarily involve is thus revealed each by the other. For the theory which I hope that I have now sufficiently supported—namely, that the "generic" proposition involves the formation of a real system in which a subject admits, through transformation, the attributes of a class, evidently combines in an organic manner both the above-mentioned types. For as a class, quâ "connotative," must involve generic attributes, so a proposition must involve an exposition of attributive relations; but because again this cannot be effected till the lower whole of members has resigned itself to the transforming influence of the higher, it cannot be effected without inclusion in a class which is thereby partly analysed. With regard to the syllogism, whose essential advance upon the proposition lies, if my view be taken, merely in its systematisation of a hitherto unmediated realism, the formula "Nota notæ est nota rei ipsius" is—to judge

by its actual interpretations—the progress into inference of the unintelligible divorce of attributes from the terms which carry them; while the "Dictum de omni et nullo" is the similar progress of denotation-theories beyond the proposition. Both agree only in stultifying the purpose of the syllogism by bringing it to ruin as an instrument of realism. For if genera be either merely sets of numbers or, again, merely attributes in what way can lower individuals in developing their characters either simplify or organise reality? Or, to urge a charge which seems in either case quite fatal, if genera be connotative voids in need of a specific determination through a differentia, the conclusion of the syllogism where the genus is the predicate seems to be much worse than useless. On such a view the first figure is so thoroughly transformed as to involve the proof of the presence within individuals of what is relatively "matter"; nor does it seem possible to escape the really nominalistic conclusion that the fourth figure, in predicating species of genera and not genera of species, has become the expression of a rationality to which the rest can lay no claim.

To sum up. Without moving out of classification we have been able to develop what are evidently the main formations of the Aristotelian logic. The discrepancy on the other hand which was noted between the "logic of classification" and that of Aristotle has resolved itself into what may be regarded as the single point of a discrepancy in the analysis of class attributes. I urge therefore that we may definitely answer the question which this paper proposed by concluding that classification is the real, if implicit, basis of the Aristotelian logic.

Two main lines of objection appear to me to be open to this conclusion. It can be said in the first place that the doctrines of the Aristotelian logic are at least not confined to class concepts and their attributes. It is true, for instance, that Aristotle includes in his logical doctrine propositions of the kind "This stick is white". I think however that as an objection this would rest on a misunderstanding. I do not deny that there are to be found in the Aristotelian logic doctrines which are emphatically not developments of classification. But this would show, in my opinion, not that classification is not its real basis, but that in the absence of the realisation of this it has simultaneously developed what are really other forms. In consequence our business is, not for such reasons to repudiate this theory, but to isolate the various forms wherever they appear. The attributive judg-

ment—as opposed to what I have called the generic judgment —would then belong to one such form; and its inferential and other developments, at present confused with, though, I think, clearly different from, those of classes, would rest upon their own distinguishable basis. This brings me to the second objection. It may be said that the limits which this doctrine involves could not possibly have been the limits in which the mind of Aristotle moved, and that this therefore could not have been the meaning of his logic. But this I in some measure admit. I might indeed urge that the classificatory system is able to give play to intellectual needs which really supersede it. The most important feature of the Aristotelian logic is perhaps its insistence on universality—on connexion of content,—on independence of enumeration. Yet there is an apparent satisfaction even for this within the limits of this system; for every A proposition—to take an instance—in relating a universal species to a genus must in some way or other have overcome enumeration. Or, again, classification, it might be said, extends freely throughout reality; whatever be the ultimate nature of things there is nothing whose nature can resist it. It is therefore universal as nothing else but quantity is universal; and it has in consequence a place in some respects pre-eminent. But, waiving these points which are not essential, I wish very definitely to admit that Aristotle's practice, as I understand it, was limited to no single type; and that I may adduce evidence of this I will give one instance. In *An. Post.*, i. 13, we have the distinction drawn between the syllogism of the ground and the syllogism of the fact. Wherein then lies the real distinction? Evidently, I think, in something which is not syllogistic—not classificatory at all. Yet this distinction does not, we ought to notice, suggest to Aristotle a second non-syllogistic principle as the basis of reality, but on the contrary it serves only to distinguish syllogisms. The conclusion thus seems inevitable that these scientific inferences, involving as they do by their form no necessary knowledge of their ground, are what have been called second-class inferences (by Prof. Bosanquet, *cf. Knowledge and Reality*, p. 278), and that in consequence they do not really represent, however they be taken to represent, the real activities of Aristotle's mind.

But I will conclude. The objections with which I have just dealt point to the consciousness that classification does not, as it has sometimes been supposed, exhaust the forms of logic, but that, as in mathematics, algebra and geometry for instance spring from diverse roots, so it may not be im-

possible for logic to develop various species. Upon the fundamental soundness of this consciousness I wish to be emphatic. For I believe that so long as logic fails to recognise within it the activities of distinguishable forms it will deprive itself of its only clear method of advance. Of these forms one has been very briefly outlined, and if we can conclude anything from it, it must be this: that without a most unnecessary ambiguity, it is, in virtue of its form, insusceptible of rationalisation whether by symbolic methods on the one hand or by "modern" methods on the other. Syllogisms cannot advantageously be reduced to symbols; nor so "restored" as to lose (as if they had been statues made of putty) the characteristics of their own school. On the other hand if the so-called syllogisms of the school of Lotze are developments, as I believe, of other forms, then, as resting on a diverse basis, they need not be at pains (as they often are) to apologise for breaking rules which were never formulated to control them. For such manifestations are nothing but the sign of the marring of the bottles—of the old skins which cannot hold the new wine. The actual prosecution of these other forms is in a sense, I am aware, demanded here; for that classification is not merely the sphere but also essentially the limit of Aristotelian logic can only be finally proved by showing that the nature of the later forms is not formally identical with its own. I must be content however to leave this here, and will only add that the ultimate basis of this second type is, in my opinion, Relation; and that Relation entered as a guiding force into philosophy with the difficulties —so alien to those of Scholasticism—which were involved in the "thought" and "extension" of Descartes. It is, in other words, from Relation that the characteristic doctrines of modern logic, inductive and deductive, ought, in my judgment, to be consciously evolved.

## V.—DISCUSSIONS.

### ON THE AMBIGUITY OF PRAGMATISM.

LIKE other readers of MIND I have been occupying myself lately with Prof. James's lectures, and with these I have been reading the defence of Pragmatism offered by Prof. Dewey in a late number of MIND (No. 63). Their account of the matter strikes me as in certain points calling for further explanation, and I am venturing to offer some remarks on this head. If Profs. James and Dewey do not yet know what Pragmatism means, there is no one, I imagine, who is likely to be in a better case. And this must be my excuse for having neglected, perhaps wrongly, the discussion of the subject by others. I may mention here that Dr. Schiller's unceasing manifestoes have for some time past failed to attract my attention. In what follows I am concerned therefore solely with Profs. Dewey and James, and I will begin with the latter.

I. While reading the lectures on Pragmatism, I, doubtless like others, am led to ask myself, 'Am I and have I been always myself a Pragmatist?'. This question I still find myself unable to answer.[1] The meaning of practice and practical is to my mind with Prof. James most obscure and ambiguous. On the one side he insists on a doctrine acceptable perhaps only to the minority. On the other side he extends so widely the limits of his creed that few indeed would in the end be left outside the fold. I will remark first on the wide and next on the narrow sense given to Pragmatism.

(i.) One of the objections raised against Pragmatism has been its alleged degradation of truth. All value except of a borrowed kind has apparently been denied to theory. What it is which in the end has ultimate worth for the Pragmatist, has remained to myself a matter of mere inference and conjecture. But what has seemed certain is that theorising has been condemned as worthless except as a means, while that which has value in itself has been left undetermined. Whether for instance the Pragmatist takes the world of art to belong to the region of the worthless-in-itself, I at least could not learn. This situation, surprising to myself, has on one understanding of Prof. James ceased, so far as he is concerned, to

[1] *Cf.* MIND, No. 62. For the ambiguity of Pragmatism I would refer the reader to Mr. McTaggart's admirable review in the last number of MIND. I saw this only after the whole of what follows had been written.

exist. For he takes the Good as a genus of which truth is one species. He denies or subordinates the distinction of theoretical and practical. Theory is one kind of practice and so apparently is theoretical enjoyment (217). And I suppose that fine art and the beautiful once more fall under this same head of practice. And I conjecture that Prof. James would also include under 'practical' all human enjoyment. And, if this is so, who, except perhaps some narrow Hedonist, would wish to dissent? Life in all its main aspects is allowed to be the end, and none of these aspects is excluded and degraded to the level of a mere external means. Theory, besides its use in altering the course of events, may be pursued independently within certain limits,[1] may be allowed to satisfy its proper want, and to use its own criterion. And the same thing again will hold good in the case of fine art. I indeed may wonder what purpose is served by torturing everything that is good and valuable under the head of practice. But, if the substance of all for which I have fought is conceded, I should think it unreasonable to dispute about a word.

In the ordinary sense of the word practice therefore, according to Prof. James, truth need not be directly concerned with practice. Truth indeed must not become transcendent. It must not turn itself to some other world out of relation with the world of our perceptions and actions. But, so long as truth maintains its connexion, however indirect, with the sphere of our doing and suffering, the Pragmatist is satisfied. "Any idea that helps us to deal, whether practically or intellectually, with either the reality or its belongings . . . will hold true of that reality" (p. 213). This denial of transcendence, this insistence that all ideas, and more especially such ideas as those of God or again the Absolute, are true and real just so far as they work, is to myself naturally most welcome. Most of us have, I think, now for some time accepted and tried to act on this principle. It hardly appears to me to be, at this time of day, revolutionary, but still if this is what Pragmatism means, so much the better for Pragmatism.

And there is a further point on which Prof. James seems once more to endorse our ideas. I had been, I confess, led to think that, where the Pragmatist took successful practice as the test of truth, he meant this to hold of the individual agent. The idea that worked best in the furthering of my individual existence, I thought, was truth for me. I understood in short that good for the individual and true for the individual were much the same thing, and that further the individual could apply this criterion. And naturally I found that this led to difficulty. We speak, for instance, of a man's life being ruined by the useless discovery of some truth, say of his deceased wife's infidelity, and we hardly see our way to set down a truth of this kind as error. But the whole difficulty, we now learn from Prof. James,

[1] I have endeavoured to define these limits elsewhere. See MIND, N.S., No. 51.

was manufactured by ourselves. It is a living witness to our blindness, our incompetence and injustice, not to use terms still more abusive (p. 233). For Pragmatism, I now understand Prof. James to say, does not pretend to hold of the individual. The idea that in a man's case does not work, or that works to his ruin, may for all that be true. For the true is "the expedient in the long run and on the whole" (p. 222). And, this being understood, the whole difficulty so far disappears.

It is succeeded however, I would urge, by fresh troubles. For what is "the long run" and "the whole," and how does the individual get to know about things like these, which seem really beyond him? On this vital matter Prof. James, it seems to me, leaves us without much assistance. We may conjecture that "the long run" is the process that leads (if it really does lead) to the final victory of Good. We are reminded perhaps of that

> One far-off divine event,
> To which the whole creation moves.

But I am very far from sure that we are reminded rightly. And what "the whole" is to mean seems, to my mind, beyond probable conjecture. Is it this or that set of beings inhabiting our planet, or is humanity but a small, a microscopical and an inconsiderable element among the beings that have value? In speaking of that which he terms "humanism" Prof. James would have felt himself compelled, we might have supposed, to deal with such dangerous ambiguities and such distressing uncertainties. But another course unfortunately seemed to him more desirable. The result, however, so far as I see, is that "the expedient in the long run and on the whole" remains unknown and unknowable. And yet it is this apparently by which the individual has to regulate his life.

And possibly Prof. James holds that the individual must walk here by faith (296). The individual does not know and he cannot see that truth and goodness now are one, or how they ever will become one. But he must do what seems to him to be best, and again accept what seems to him to be true, and he must trust and believe that truth and goodness in the end will not be divergent. But, with this, the relative independence for us of truth, beauty and practical goodness, seems fully justified, and, so far as the practice of the individual is concerned, Pragmatism seems in short admitted not to work.

And with such a result I, in the main, naturally find myself in accord. To me, as to many others, it seems that in the end truth, fact and goodness are one, though I am forced to admit that we cannot perceive and verify this unity in detail, and that therefore in and for the individual a relative divergence must be recognised. Hence between Prof. James and myself the difference in the end would be practically trifling. But, on the other hand, theoretically, as soon as Prof. James attempts to deal with first principles, the

case, I think, will be altered. For, as against our principle of immanent Reality, he seems to have adopted a transcendent Ideal. And that, I imagine the history of philosophy has tended to show, is a thing which, as an ultimate principle, will not work.

(ii.) If the above interpretation of Prof. James is correct, Pragmatism is no militant creed. It is in harmony with views against which it is commonly understood to protest, and to imagine that it portends a new dawn of philosophy (6) would be obviously ridiculous. And I hasten to add that I have not imagined that Prof. James would accept his doctrine as it is above interpreted. I think it at least possible that he takes the whole theoretical side of mind to be an instrument worthless in itself, used to gain a valuable end which he finds it convenient to leave in darkness. I am sure that the common antithesis of intellectual or theoretical and practical appears in his pages (*e.g.*, p. 188), and that the former of these words is used derogatorily. The conclusion that, at least for the practice of the individual, Pragmatism is untrue, seems to me contrary to the whole tendency of Prof. James's teaching. And, if I rightly understand him, Pragmatism, far from being a view which tends to reconcile extremes, is committed to the denial of anything contrary to pluralism. It is committed to the assertion of the absolute mutability of the Universe and the absolute reality of individual disaster and evil. With regard to Prof. James's doctrine of human Freedom, here, as elsewhere, I find it impossible to decide what it means.[1] But the pragmatic doctrine of Free Will, as it appears in this volume, seems to myself to be repeating that which I, for instance, under Hegelian influence sought to urge, in my *Ethical Studies*, some thirty years since. And Prof. James's view of Freedom, whatever else it may be, must, I assume, be something which leaves him at liberty to denounce Hegel and his followers.

The conclusion then which I would submit to the reader is that Prof. James's Pragmatism is essentially ambiguous, and that he throughout is unconsciously led to take advantage of its ambiguity. It can at discretion be preached as a new Gospel which is to bring light into the world, or recommended as that old teaching of common sense which few but fools have rejected. The reader may, I think, be helped to appreciate this attempt to make the most of both worlds, if I sketch briefly for him another and, as I think, a better working creed.

I perhaps may here recall the fact that I have advocated elsewhere certain views on first principles. But on the other hand I have seen, if I may say so, far too much of metaphysics to think of staking vital issues on the result of speculative inquiry. And for practical purposes I hold in reserve a belief, in common, I imagine,

[1] I have remarked on this point some years ago in a former number of MIND, a reference to which in writing the above I unfortunately cannot give.

with an increasing number of persons, a belief, the advantages of which Pragmatism would, it seems, like to appropriate surreptitiously. According to this practical creed there is in the end no truth for us save that of working ideas. Whatever idea is wanted to satisfy a genuine human need is true, and truth in the end has no other meaning. Our sense of value, and in the end for every man his own sense of value, is ultimate and final. And, since there is no court of appeal, it is idle even to inquire if this sense is fallible. It is this which in the end decides as to human interests, and, whatever ideas are needed to serve those interests, are true, however much these ideas are in contradiction with one another or even with themselves. The one question in the end is whether the ideas work. But there are degrees of truth because ideas may work better or worse, and because again the interests which ideas subserve are more or less valuable. The above is scepticism, if you please, but it is not the stupid scepticism which offers itself as positive theoretical doctrine. It is the intelligent refusal to accept as final any theoretical criterion which actually so far exists. And there is here no mutilation of human nature, since every side of life, practical, æsthetic and intellectual, is allowed its full value. We are emancipated once and for all from the narrowness of all one-sided attempts at consistency.

When a man, holding to this less one-sided Pragmatism, says that he for instance believes in God, not *a* God but a God through whom perfect goodness in spite of appearance is real—how futile in the case of such a man are Prof. James's findings. Prof. James will tell this man that he is a quietist, that he wants to "give up" and to "lie back," and to avoid paying the just price of salvation through individual sacrifice and effort (276, 289, 292, 295). But the man will answer that, while he believes in the reality of perfect goodness, he believes also that nothing is more intensely real than individual action for good, and that he believes in these two things not one in spite of the other, but one even because of the other. And he will regret that Prof. James should be so wanting in experience as to be unable to perceive obvious facts, and should be in such bondage to the traditional worship of theoretical consistency. And as against such a position, which I do not suppose Prof. James will call novel, what has he to offer and to object in the name of Pragmatism? He has offered at present nothing, so far as I see, beyond one-sided prejudices, and a blind appeal to theoretical consistency, and an uncritical faith in the ultimate validity of some undiscussed Law of Contradiction.

But that Prof. James could accept the position I have sketched above to myself seems impossible. I do not suggest that the result is too sceptical for a Professor to endorse, but beyond this there are other obstacles which seem insurmountable. For, if the above is accepted, there is at once apparently an end of the new Gospel, with all its promises and all its boasts about a new dawn of philo-

sophy, together with its anticipatory outbreak of dithyrambic ecstasy (p. 257). And something perhaps even worse than this would follow. For Prof. James would forfeit all right to emphasise as ultimate truth the absolute mutability and incoherence of the world, and the absolute value of this or that individual success or disaster. In short all those prejudices on which he rides to the attack on Absolutism would have to be foregone. These ideas could, none of them, claim more than a relative worth, and their opposites would also and at the same time possess truth.

But if Prof. James cannot be content with so broad a "pragmatism," his alternative, I submit, is to develop his theory of first principles. Assuredly I am not alone in the desire that he would turn his back for a time on sporadic articles and on popular lectures, with their incoherence and half-heartedness and more or less plausible ambiguities, and would work in the way in which a man who seriously aims at a new philosophy is condemned to work, and with a result which I at least feel sure would repay his labour. And perhaps in the meantime he might remind his followers on this side of the Atlantic that, of course without prejudice to the future, it is not yet true that the crowing of the cock brings the sun above the horizon.

II. I pass on now to consider the account of Pragmatism given by Prof. Dewey in MIND, No. 63, and here, as with Prof. James, I find much which to myself seems ambiguous. I am again left uncertain whether in the end I also am a Pragmatist, or where and how on the other hand I fail to deserve that title. But I have to begin by putting on one side what to my mind are sheer irrelevancies. I myself have long ago (1883) pointed out that theory takes its origin from practical collision, and again for myself theory implies a theoretical want and its satisfaction. And it is obvious that, if Pragmatism means no more than this, I, as I presume Prof. Dewey is aware, have been for many years a Pragmatist, and, however well he preaches, he is preaching here to one long ago converted.

Certainly I must suppose therefore that for Prof. Dewey more than this is wanted for Pragmatism, and I must go on to inquire how much more is wanted. In the first place Prof. Dewey, I understand, insists that theory is only an instrument. Now we all know that there are instruments and activities which have no value but a borrowed one. They may be necessary, but still in themselves they may be valueless or even worse. Hence we naturally ask if this is to be the case with theory, and again with fine art. And, if this is to be the case with one or both, we naturally want to be informed as to the ultimate source of the value which is transferred to them. But, so far as I see, Prof. Dewey leaves us here without any answer. And I do not myself understand how any thinking person is justified in accepting a doctrine left in this am-

biguous state. In philosophy surely one has no right to teach that something is only a means, unless one is prepared to state the end to which it conduces and by which it is measured.[1] And I must even be allowed to set this down as to my mind elementary.

Passing on then unsatisfied from this point let us ask what is meant by the practical nature of thinking and truth. Let me say here at once that I have failed, I am sure, to understand what practical means for Prof. Dewey.[2] But an idea, it appears, is true only so far as it issues in behaviour. Now, as applied to the early life of the soul, I am prepared for the sake of argument to accept this statement unreservedly. It is not, I think, even as applied to the beginnings of intelligence, entirely correct. But I need not here enter on any reservation which seems to me to be required. Let us for the sake of argument agree that early soul-life (as I, for instance,

[1] Prof. Dewey (p. 328) certainly denies that the end is the abstraction of "mere practice," but such a denial is obviously no positive answer. And when he adds that he cannot believe that "any empiricist has ever entertained" "such a thoroughly intellectualistic construction," I confess that he amazes me. The "empiricist" in my own experience is precisely the man who more than others takes mere abstractions for realities. In any case if the Pragmatist cannot even attempt to state his own doctrine of ultimate value, that, it seems to me, is something like an admission of bankruptcy.

[2] "By practical," he says, "I mean only regulated change in experienced values" (p. 328). But, if Prof. Dewey means no more than this, his whole article is surely one long *ignoratio elenchi*. How does such a definition exclude the existence of pure theoretical activity and practice? And, if it does not, what becomes of Prof. Dewey's polemic? Pragmatism on this understanding is in agreement with even an extreme one-sided intellectualism, so long as that asserts an intellectual need and activity. The reason, I venture to think, why Prof. Dewey fails to realise this, is that he uses 'practical' in a further sense and passes unconsciously from one sense to another. In this further sense there is the usual opposition between practice and mere theory, and it is, I presume, with this sense in his mind that Prof. Dewey asserts (p. 335) that the truth of a mechanical idea is inseparable from the construction of a working model. In short, Prof. Dewey seems to define practice in one sense and then to slide, wherever it is convenient, into another sense. Either this, or he fails wholly to realise the nature of the position which he believes himself to be attacking.

Another point which I may notice is the connexion, according to Prof. Dewey, between having an idea and holding it for true. There are statements as to "assumption" (328) and "hypothetic" (341) which I probably have failed to understand. They look to myself, however, as if Prof. Dewey was assuming the reality of "floating ideas" when in controversy with persons some of whom at least regard these ideas as a delusion untenable both in psychology and logic. And it seems to me further that the rejection of floating ideas tends to raise difficulties, the existence of which Prof. Dewey fails to recognise. I cannot but think that here, as elsewhere, a reference to Dr. Bain's views would have been useful. But in any case the existence and possibility of mere ideas, Prof. Dewey should remember, is denied, and cannot in controversy be assumed.

urged some twenty-five years ago) has no ideas about things except the ideas of its own practical attitude towards them. And let us agree that, except so far as an idea actually issues in practical behaviour, it cannot be retained.[1] Still does it follow from this that later on a theoretical need and satisfaction is not in fact developed? Apart from such a hazardous conclusion the entire argument from origin appears to me to be worthless. And I presume therefore that Prof. Dewey's main contention is this, that there is not now in fact any theory which is not practical and practical essentially.

I would repeat that I have failed to understand Prof. Dewey's real position. And I have remarked above on the fatal ambiguity that attaches to the word practical. But if we take practical in the sense in which it is opposed to theoretical—and if we do *not* take it so the whole controversy seems to vanish—objections to such a position present themselves at once. (1) Suggested ideas —some of them apparently remote from anything which I am to do or could do—are accepted as true. And not only this, but in many cases these ideas appear to coalesce with and to qualify my world, without any experienced collision and apart from anything which I myself seem to do. This account holds good of a large amount of actual present beliefs. And, though Prof. Dewey fails to recognise the extent to which this takes place, he appears to admit that in the case of "tested" ideas (341) we have judgments not issuing in actual behaviour. Further, even where ideas do concern my conduct, I would submit that even here they need not be entertained practically and need not in this sense be practical. But in any case as we have seen, a large number of ideas at least appear in no sense to relate to my behaviour either in themselves or in their results. (2) I have so far dealt with cases where no actual preceding want or desire for the result can be shown to exist. But, even where the attained truth is the satisfaction of an actual desire, that desire and that want may be in a word a desire for truth itself. Knowledge here, practical in one sense, will still not be practical in the sense of being concerned merely with my behaviour. And 'concerned' is not the word, for according to Prof. Dewey, if I rightly understand him, truth consists merely in my practical behaviour and is itself nothing otherwise. And, when I apply such a description to the solution of every possible historical or abstract problem, I appear to myself to have arrived somewhere out of contact with actual facts. I can keep hold of them only when I admit that practice itself may be essentially theoretical.

Prof. Dewey to some extent seems to be aware of these objections, but how he considers himself to meet them I am unable except in part to understand. I can therefore do little more than set down what seem to me to be possible ways of reply. The reader will

[1] I do not discuss here the doubt which might be raised with regard to the ideas of suffering as apart from doing. If you go back far enough I should not suppose that such ideas exist.

understand that in what follows, except where this is stated, I am not pretending to criticise Prof. Dewey's account. I am detailing some points on which it seems to me that clearness is essential and has not been secured. (i.) The first answer to the above objections would consist in urging that truth is the behaviour of an idea rather than that of a man. When an idea acts and works in me in a certain manner that is truth, and therefore truth in this sense is practical. I mention this view though I do not suppose that Prof. Dewey would accept it. (ii.) Another way of showing that an idea is practical, although I really do not act on it, is to urge that I should act on it if the conditions were otherwise, or shall act on it perhaps in the future (339). This is the position taken long ago by Dr. Bain who, for some reason that I do not understand, is here ignored. It is of course open to the obvious reply that the question is about the actual and not about the possible or future, and that to identify these is not permitted.[1] We may perhaps put the same point otherwise by asking in what my knowledge that conditionally or in the future I should or shall act, itself now actually consists. To answer for instance that with an idea there is a more or less tentative struggle to act, and that therefore there *is* an act—seems unsatisfactory. We do not always seem concerned with any struggle, and as to what "tentative" is to mean we require information. Any such phrase we recognise as an old device for going on saying that a thing is so, when obviously and visibly it is not so. But whether, and, if so, how far any of the above is applicable in the case of Prof. Dewey I am unable to say. (iii.) Let us then pass from the view that thought implies essentially an issue in external behaviour. Let us suppose that thought is always an act, and implies therefore of course a psychical alteration of myself. But let us suppose that this psychical alteration, though necessary, is not the main essence of thought. And let us take that main essence to lie in a qualification of reality which is ideal. If this is the view urged by Prof. Dewey, as I can hardly imagine it is, I must lament that he has so failed to express it clearly. With such a view it is obvious that in the main I agree, and how it should be urged against myself I am unable to understand. (iv.) And yet, agreeing in the main with such a view, I cannot wholly endorse it. For in the word "act" there is still too much ambiguity or else downright mistake. There are truths suggested and at once accepted where certainly there seems no act in the sense of my will or of my act. The idea seems to coalesce with, or, let us say, to be apperceived by my world or one of my worlds. In this case I am altered of course, but in what sense do I act? And can we even say here that, so far, the idea's truth for me lies in its working and in its theoretical conse-

[1] This point has been dealt with by me many years ago. I have ventured to remark that the uncritical identification of the real and the possible is a leading characteristic of English empiricism. I would now venture in addition to invite the attention of Prof. James to this point.

quences? Have we not got in such a case, so far as I am concerned, something like passive acceptance of the idea? I agree that, when we reflect and when we come to the criterion of truth, the truth of an idea is inseparable from its theoretical results. And, if you like to add that here I always act, I am not concerned to deny this. But how this is to hold in the case of all acceptance of truth I am unable to see. Prof. Dewey seems to perceive the above difficulty, not wholly but so far as it applies to "tested ideas" (341). But his answer is, I regret to say, to myself unintelligible. What is "permanent status"? What is "energy of position" (p. 341)? To my mind these phrases seem to be no better than mere mythology. And to me they come as a tacit admission that the theory will not work when applied to facts.[1] And I have already dealt above with the apparent attempt to revive Dr. Bain's method of escape. (v.) Finally (to pass on) the issue of the idea in behaviour may be admitted not to hold now and here, at this time or of this agent. No more may be meant than that at some time the true idea will also be true practically. I hesitate however to understand Prof. Dewey in this sense even more than I hesitated in the case of Prof. James. With such a conclusion I should agree, if for 'at some time will' I may be allowed to write 'somehow does'. Still in neither case, I submit, can such a criterion be used in detail. To some extent obviously therefore, I urge, we must remain content with mere theory. And really this is all for which I myself have contended and contend. And if you insist that such a state of things is only provisional, then, so far as I see, the provisional state of things will last as long as there are finite beings.[2]

Against the preceding it may be urged, though I do not say by Prof. Dewey, that the question is about the main and general tendency of things. That general tendency is that the true idea is the idea which works best even externally. And it may be added that this general tendency justifies the ultimate definition, although we cannot verify this definition in detail and in the case of all ideas. But such a position, if occupied by Prof. Dewey, would to my mind be wholly untenable, if at least he is committed to the doctrine that nowhere for us in our experience can truth be other than that which works practically. For such a denial is not only (as we have seen) out of harmony with fact, but in the end it would itself destroy the general conclusion and the ultimate definition.

For how, I ask, are we to arrive at ultimate knowledge of the main tendency of things? Take this very question which seems to be at issue between Prof. Dewey and myself. We each of us are

[1] *Cf.* Prof. James's "cold storage". Why not "hibernation" or "slumber" or "on half-pay" or any other mythological metaphor, whichever for the moment seems to bring most conviction?

[2] The above, of course, justifies the distinction in practice between the idea which is really true and the idea which works best practically (p. 337 note).

face to face here with a colliding situation, and as to this and so far we are agreed. Now what are we trying to do with this situation? I on my side say that we seek primarily a theoretical solution. We are each of us attempting to find an idea which will work, work in the sense of qualifying reality ideally in such a way that the collision so far is at an end.[1] And I urge that this true idea does not in respect of its truth or falsehood imply a passage into any practical behaviour on my part. The idea involves a psychical change in me certainly, but that, I contend, is not the essence. If Prof. Dewey replies (as I think probably he does not), that this aspect of psychical change in me is the essence of truth and of falsehood then I would ask him to state this plainly and to attempt to face the problem on this basis. And I would ask him to remember that the question is *not* whether with belief and judgment there *is* a psychical change in me. The question is what we are to say about this psychical event, and how otherwise it must be qualified, so that it is not merely a psychical event but is specially a true or false belief and judgment. But if Prof. Dewey falls back upon practical result and non-theoretical behaviour, then I would invite him here to say what this is. What is it that I do here and what is it that he does here, each of us, I presume, differently in the case of the diverse ideas which we accept? I myself am unable to verify this issue in practical behaviour, and in any case the contention that this issue makes truth's essence remains to my mind untenable.

If however in this ultimate appeal to fact we are forced to recognise theoretical truth, then to go on from this basis to deny such truth, would be suicidal. To upset by knowledge about the main tendency of the world something for us more ultimate than such knowledge, seems to destroy knowledge altogether. To build further upon the foundation on which we stand is of course legitimate. To insist that truth, to reach perfection, must also in every case somehow issue in act, does not deny that truth for us, at least to some extent, must be sought and found otherwise.[2] On the other hand to insist on the practical result of the idea everywhere as the criterion of truth, and wholly to deny truth as existing otherwise, is, I submit, to insure disaster. But I must end as I began, both in the case of Prof. Dewey and of Prof. James, by deploring their ambiguity or my blindness, which in the end leaves me uncertain what it is that they mean to affirm and to deny.

So much indeed of what Prof. Dewey urges seems to me so true and so admirably stated, that I can only applaud and regret that it should seem to be directed against views which I hold. I agree that practical collision is the origin of truth, and I agree that for

[1] On p. 330 Prof. Dewey appears to traverse this statement directly.

[2] In the same way when a too ardent Darwinian teaches that the true idea is the idea which prevails, his position so far is consistent. But, when he goes on perhaps to insist that truth is nothing but prevalence, he falls into inconsistency if he now offers at least *this* truth as more.

truth to pass into a new practical result may be called (if we speak at large) truth's natural and normal end. But that by us men theoretical truth, as well as fine art, must be cultivated, at least to some extent, independently, I am no less assured. The denial of this appears to me to violate facts and to threaten us with the mutilation of our human ideal. And if theory and fine art, or either of these, is to have no worth of its own, let us at least be informed what in the end it is which really possesses value. On such a point to state no positive doctrine, and to leave it to opponents to lose themselves in more or less mistaken conjectures, is a course, I would submit, unworthy of such writers as Profs. Dewey and James.

Prof. Dewey's article raises a number of interesting questions which would well repay discussion. Among these the apparent contention (334) that truth is nothing but that which I do with an idea, and that truth therefore is made by me, could hardly be dealt with except at length. That contention would become less ambiguous and more instructive, if the problem of falsehood were included, and again that of beauty and ugliness. The question whether and in what sense I can bring into being truth and beauty, ugliness and error, good and evil, and in one word value, has of course the highest interest. The answer that not only do I bring all this into existence, but that the distinctive essences of all these things are nothing beyond what I do and make—I hesitate to attribute to Prof. Dewey. And his isolated treatment of this question so far as regards truth, ignoring even the difficulties caused by falsehood, seems to me obviously insufficient. But to deal with this and other interesting issues raised in Prof. Dewey's article, is here clearly impossible.

I propose again to say nothing here in reply to Prof. Dewey's discussion of certain views held by me. It is not that I do not value his criticism, or again that in most cases I should find it difficult to make an explanation or a reply which, to myself perhaps, would be satisfactory. But I think it far better to defer anything which I have to say to another opportunity. Pragmatism proclaims itself, I understand, as a great new way in philosophy. Hence, if it is true, it is not true because those particular views with which I for instance am identified, are demonstrably false. Such an alternative might be convenient but it is, of course, indefensible, and with the injustice which it would offer to other views I could not associate myself. Pragmatism is true, if at all, because it can successfully deal with all ultimate issues. It may indeed be shown otherwise to be invalid, but it cannot otherwise be shown to hold good. And I will venture to add that in my opinion some such reminder as this (though perhaps not in the case of Prof. Dewey) seems desirable and necessary.

F. H. Bradley.

## MR. HALDANE ON INFINITY.[1]

THIS address falls into two parts, of which the first may be described as an endeavour to restate shortly and intelligibly the parts of Hegel's greater Logic which deal with mathematics, while the second, having dismissed the "false" infinite, proceeds to some meditations on the "true" infinite, *i.e.*, the Absolute. These two parts have, so far as I can see, no connexion except that the word "infinite" happens to be used both for a mathematical concept and for a (quite different) philosophical concept. What is rather curious is that Mr. Haldane himself seems to recognise this absence of connexion, for he says (p. 1): "An infinite series suggests, or ought to suggest, nothing analogous to an infinite God". Apparently he conceives, however, that there is a dialectical connexion between them—that the infinite series, when its contradictions are brought to light and synthesised, is found to be merely an inadequate expression of an infinite God. To one who holds, as I do, that there are no contradictions about an infinite series, this connexion of course fails. I shall, therefore, say no more about the "true" infinite, confining myself to what Mr. Haldane says about the "false" infinite. I may remark, however, that if I had the bestowal of the adjectives "true" and "false," I should interchange them, since I think the "false" infinite logically faultless, and the "true" infinite a mere chimæra. When Mr. Haldane speaks of "modern logic," he must be understood as meaning the logic of Hegel (and his disciples); and when he speaks of "the conception of infinity," he must be understood as meaning the conception of infinity as it existed in Hegel's day. For this reason, what he says about the Infinitesimal Calculus is in the main not relevant to the present state of that science. It is true that he quotes (pp. 4, 5) two American authors, Dr. Bledsoe and Prof. Buckingham, in support of his contentions. These authors are, unfortunately, unknown to me except through Mr. Haldane's quotations. In these quotations they describe, very accurately, the state of mind of an intelligent pupil who is being taught the Calculus by an ignorant teacher. They do not say that the teacher they have in mind is ignorant, but if he is not, the things they say are

[1] *The Methods of Modern Logic and the Conception of Infinity.* The Presidential Address to the Aristotelian Society. By R. B. Haldane, M.P., LL.D., F.R.S. Delivered at the opening meeting of the Twenty-ninth Session, 4th November, 1907.

no longer true. It seems a pity that Mr. Haldane has not (apparently) had the good fortune to come across any of the recognised modern authorities on the Calculus, such (for example) as the *Encyklopädie der mathematischen Wissenschaften*.[1] If Mr. Haldane had read any such authority, he would have found that, while his criticisms of Leibniz (p. 5) are fully justified, no such criticisms are applicable to the present theory of the Calculus. He would there have learnt that the whole subject proceeds without ever introducing the infinitesimal, that the fundamental conception is that of a *limit*, and that a limit is something quite different from what non-mathematicians suppose it to be. I will endeavour to explain these points, though it should be said that only careful study makes it possible to grasp them thoroughly or to see their bearings.

Mr. Haldane sums up "the broad working conceptions of the Differential Calculus" in two propositions (p. 7):—

(1) "A differential Coefficient expresses the rate of change of a function with respect to its independent variable."

(2) "If there be a fixed magnitude to which a variable magnitude can be made as nearly equal as we please, and if it be impossible that the variable magnitude can ever be exactly equal to the fixed magnitude, the fixed magnitude is called the limit of the variable magnitude."

He proceeds: "Now, this second proposition bears the mark of the cloven hoof. The idea of negligible difference is present in it."

As to the first of these propositions, it should be observed that, if the modern "arithmetisation" of mathematics is not all a mistake, it puts the cart before the horse. "Rate of change" is a phrase which can only be interpreted by means of a differential coefficient, and therefore we must first define the differential coefficient before we can speak of the rate of change. As regards the second proposition, it does not constitute a definition of "limit," but a property which belongs to limits of a certain particular sort, namely limits of magnitudes in compact series of magnitudes in which, given a magnitude $a$, and a difference of magnitude $c$, there is always a magnitude $b$, other than $a$, such that the difference of $a$ and $b$ is less than $c$. This is an extremely special case, not realised in most of the series in which limits exist. As for the "idea of negligible difference," this is not present even in this special case. The reason why Mr. Haldane supposes it present is, presumably, that he attributes to mathematicians the belief that a variable "ultimately" becomes equal to its limit. No such belief is involved in the notion of a limit, and in many cases it would be palpably inapplicable.

In order to be clear on the subject, it is necessary to realise, in

[1] I mention this as being the most official, but exactly the same account of the matter will be found in any other well-informed modern book. See for example Dini's *Theorie der Functionen einer veränderlichen reellen Grösse* (Leipzig, 1892).

the first place, that a variable does not vary. A variable is a symbol which is to have one of a certain set of values, without its being decided which one. It does not have first one value of the set, and then another; it has at all times *some* value of the set, where, so long as we do not replace the variable by a constant, the "some" remains unspecified. Another point on which it is important to be clear is the following. A limit belongs, properly speaking, not to a variable, but to a class contained in a series. When we speak of the limit of a variable, we mean the limit of the class of values of the variable. A third point on which confusion is common is, that a limit does not belong to a class intrinsically, but only in relation to some series in which the class is contained; a class may have one limit in one series, and another in another, or it may have a limit in one series, and no limit in another. Finally, a limit must not be conceived as something to which the successive terms of the class approach indefinitely near; they may all be at an infinite distance from the limit, or at a distance which remains permanently greater than some given finite distance; or the series concerned may be one in which there is no such thing as distance or difference.

The definition of a limit is as follows. Given any series, and a class $\alpha$ of terms belonging to the series, a term $x$ belonging to the series is called the *upper limit* of $\alpha$ if every member of $\alpha$ precedes $x$, and every term of the series which precedes $x$ precedes some member of $\alpha$; $x$ is called the *lower limit* of $\alpha$ if every member of $\alpha$ follows $x$, and every term of the series which follows $x$ follows some member of $\alpha$.

A few illustrations will make this definition clearer.

(1) Let our series consist of all rational numbers of the form $2m - 1/n$, where $m$ and $n$ are finite integers (not zero), and the terms are arranged in order of magnitude. Then all terms of the form $2 - 1/n$ belong to this series; that is, the class whose members are

$$2 - 1,\ 2 - 1/2,\ 2 - 1/3,\ 2 - 1/4\ \ldots$$

is contained in the series. These terms, in the whole series of rational numbers, would have 2 for their upper limit, but 2 is not a member of our series. In our series, they still have an upper limit, but the limit is 3. For every term of the above class is less than 3, and any member of the series which is less than 3 is less than some member of the above class. But it cannot be said that the idea of "negligible difference" is present here. The difference between 3 and $2 - 1/n$ does not diminish without limit as $n$ increases; on the contrary, the difference is always greater than 1, and has 1 for its lower limit in the whole series of rationals.

(2) Let our series consist of the rational numbers in order of magnitude, and let the class $\alpha$ consist of all those rationals whose square is less than 2. Then this class has no upper limit. For any rational $x$ which comes after every member of $\alpha$ cannot have its square less than 2, by definition, nor equal to 2, because no rational has its square equal to 2; therefore its square is greater than 2.

But the rational numbers whose square is greater than 2 have no lower limit, therefore there are rationals less than $x$ and yet greater than every member of $\alpha$. Therefore no rational $x$ is the upper limit of $\alpha$. But if instead of taking the rational numbers only, we admit irrational numbers also, and choose $\alpha$ out of the series of rational and irrational numbers combined, then $\alpha$ has a limit, namely, $\sqrt{2}$. Or again, if our series consists of all rationals whose square is less than 2, followed by all rationals whose square is not less than 4, then $\alpha$ has an upper limit, namely 2.

(3) If we consider the whole series of integers, finite and infinite, arranged in order of magnitude, then the class of finite integers, considered as part of this series, has an upper limit, namely the smallest of the infinite integers (which is the number of finite integers). Here, so far from any question of "negligible difference" coming in, the difference between the finite integers and their limit remains constant and infinite.

The notion of a limit is, in fact, a purely ordinal notion, involving no reference to quantity whatever, and applicable to cases in which the "difference" between different terms of a series has no definable meaning, as, for example, to series of points in space or moments in time. In the particular case in which our whole series is that of rational numbers or that of real numbers, it happens that, if $x$ is the limit of a class $\alpha$, then the limit of the class of differences $x—y$, where $y$ is any member of $\alpha$, is zero. But obviously we cannot define limits by this property, first because it involves a circle in definition, and secondly because, even if this objection were circumvented, the definition is only applicable to certain very special cases, not to series in general.

We thus see that limits involve no such notion as "negligible difference" or infinitesimals. When, therefore, a differential is defined as a limit, it must not be inferred that infinitesimals are necessary to its definition. And, in fact, the so-called "infinitesimal calculus" nowhere assumes infinitesimals. The notation "$dy/dx$," introduced by Leibniz, survives in practice owing to its technical convenience; but in fundamental definitions the notation "$f'(x)$," for the differential or derivative of $f(x)$ is more commonly employed, in order to avoid the fallacious suggestion of a fraction, with infinitesimals $dy$ and $dx$ for its numerator and denominator. I will not here attempt to give the full definition of the derivative of a function, as it is very complicated, and depends upon the definition of the limit of a function for a given value of its argument. The definition of the derivative will be found in any standard work,[1] and should be studied by those who wish to criticise the Calculus. Neglecting niceties, however, a few remarks may serve to avoid misunderstandings.

[1] *E.g.*, *Encyklopädie der mathematischen Wissenschaften*, ii., A 1, pp. 20-22; ii., A 2, p. 60.

The derivative $f'(x)$ of a function $f(x)$ is the limit (in case there is one) of

$$\frac{f(x+\delta)-f(x)}{\delta}$$

as $\delta$ approaches zero either from above or below. This means that a number $z$ is called the derivative of $f(x)$ in the point $x$, if, given any number $\epsilon$, there is a number $\eta$ such that, if $\delta$ is any number (other than 0) between $-\eta$ and $\eta$, $\frac{f(x+\delta)-f(x)}{\delta}$ differs from $z$ by a number which lies between $\epsilon$ and $-\epsilon$. It is to be observed that $\frac{f(x+\delta)-f(x)}{\delta}$ is a function of $\delta$, and that $f'(x)$ is the *limit* of this function for $\delta=0$, not the *value* for $\delta=0$. The *value* of a function for a given argument is a different conception from its *limit* for that argument; sometimes the two are equal, sometimes both exist and are unequal, sometimes one exists and the other does not. In the present case, though the function has a *limit* for $\delta=0$ wherever $f(x)$ can be differentiated, the function never has a *value* for $\delta=0$. In finding its *limit* for $\delta=0$, only finite values of $\delta$ are involved; it is a sheer misunderstanding to suppose that $\delta$ becomes infinitesimal in the limit. Another point which is important to observe is that functions, even when they are continuous, do not in general have derivatives; it is a stroke of luck when a continuous function has a derivative. When, therefore, philosophers argue as if differentiability were a consequence of continuity, they are guilty of a mathematical error, though one which, until about forty years ago, the mathematicians shared with them. The theory of limits, and the modern treatment of the Calculus as based on this theory, are by no means easy, and require careful study; but philosophic criticism which is unaware of them can hardly hope to be fruitful. In Hegel's day, the procedure of mathematicians was full of errors, which Hegel did not condemn as errors, but welcomed as antinomies; the mathematicians, more patient than the philosophers, have removed the errors by careful detailed work on every doubtful point. A criticism of mathematics based on Hegel can, therefore, no longer be regarded as applicable to the existing state of the subject.

In spite of the title of Mr. Haldane's Address, he does not deal with the modern mathematical conception of the infinite, or attempt to show that it is in any way self-contradictory. I have therefore not undertaken to defend it against the epithet "false," but have attempted rather to bring to the notice of philosophers certain facts which, so far as I can see, invalidate practically everything that has been written by philosophers, from Leibniz downwards, on the logical basis of the Calculus. These facts are not very new, and not at all in dispute. It seems time, therefore, that philosophers who write on the subjects in which they are relevant should begin to become aware of them, as doubtless they would have done sooner but for the technical difficulties with which the study of mathematics is beset.

B. RUSSELL.

## VI.—CRITICAL NOTICES.

*Philosophical Problems in the Light of Vital Organisation.* By Edmund Montgomery. New York and London: G. P. Putnam's Sons. Pp. 462.

Dr. Montgomery is well known to the older readers of Mind. Between the years 1880 and 1889, he was a frequent contributor; and in his articles at that time may be found the central ideas of his new volume. Trained as a biologist, he adopted from the first a biological interpretation of nature and human life; though in such a way as to involve a metaphysical interpretation of biology. His present work is divided into two parts; the first gives an account of the fundamental problems of philosophy still awaiting solution—such as substantiality, causation, the external world, subject and object—with an historical survey of the attempts that have been made to solve them; and the second offers the biological solutions of all these problems. This arrangement necessitates a discussion of each problem twice, and leads to a good deal of repetition, especially in the tireless polemic which the author carries on against every form of Idealism.

Dr. Montgomery's own theory is "Epistemological Naturalism" (p. 100): a representative theory of cognition, from which emerges a cosmological conception similar to Spencer's Transfigured Realism. Common Sense and Science are alike concerned, he says, not with the phenomena given in perception, but with an extra-conscious world, which is the source both of phenomena and of self-consciousness. In defence of this doctrine he assails alike Absolute Idealism, Transcendental Idealism and Phenomenism. From Plato and Aristotle to Hegel and Mill, through the whole course of philosophy, he pursues his enemies; exposing the vanity of attempting, on the one hand, to disparage and neglect the sensuous world; or, on the other hand, of pretending that sensuous phenomena, as such, can make up a permanent world of real causes common to all spectators. The criticisms upon Leibnitz and Kant seem to me to be the most effective; those upon Hume less so, because they sometimes depend upon putting a dogmatic construction upon sceptical conclusions.

The first and the necessary precondition of solving all philosophical problems is, in Dr. Montgomery's view, a scientific epistemology.

This must "show how individual consciousness can be legitimately transcended; how it happens to yield universally valid knowledge" (p. 27); for "the common rational experience of all human beings must certainly have a common source of information". The same epistemology must also explain Identity (p. 37); the external World (p. 51); and Memory (p. 59). It begins with "this cardinal truth, firmly established by modern philosophy," "that our individual conscious states are the sole direct medium of revelation" (p. 61). But such conscious content is obviously a transient phenomenon, without reality, substantiality, power or permanency; and, therefore, all inquirers are obliged to assume some extra-conscious agency that has these attributes. Substantiality is the paramount philosophical problem; it requires us to reconcile the contradictory characters of something that is permanent and, at the same time, the source of all change; a task in which no one has yet succeeded. Now there is one thing, and only one, in the world that satisfies these requirements, namely, "the extra-conscious entity which is perceptually revealed as the living organism". This is continually wasted in activity, but continually restores itself, "remaining identical and yet manifesting constant changes"; "it is in all reality the only genuine substance known in nature" (p. 197).

Again, the entire fabric of knowledge, the vision of the external world and of self, the past and the future, is given to us from moment to moment in our present awareness; and the richness of this experience, its intricately significant complexity, depends on "the vast fund of latent knowledge we call our memory" (p. 73). But memory depends upon the same reintegration of the metabolic process, enabling the living being "to emit in successive, ever-renewed moments of awareness memorised and systematised experience" (p. 234). And causation, the reference of an "occurrence to an antecedent cause, presupposes the organically connected memory of the previous conscious experience" (p. 331). Similarly all other philosophical problems must be referred for their solution to the same fact of vital organisation. And by 'vital organisation' we are to understand not the visible body but "the extra-conscious power-endowed existent perceptually revealed as our organism". "This our real being emits directly, from within, our own conscious content; and indirectly, through roundabout external sense-stimulation, it compels also its perceptual representation in observers" (p 133). These internal and external effects of the same real being give rise to the supposed duality of soul and body, subject and macrocosm (p. 152). But the most important result of discovering this real ground and matrix of consciousness is, that it vindicates the truth of our belief in other minds, and enables us to escape from the Solipsism which is the unavoidable conclusion of every sort of Idealism.

Such is a brief and, of course, very inadequate outline of the main contention of this remarkable book But by the way the

author assails not only the whole line of earlier philosophers but also some of the most prominent doctrines of contemporary science; the conservation of energy (P. II., § 4); the cell-theory of organic life (P. I., § 8); the doctrine of Natural Selection as the general explanation of organic development (P. II., § 7); and he maintains the existence of teleology in Nature (P. II., § 8). At none of these points does his argument seem to me successful; but no doubt the readers of MIND are most interested in the theory of Epistemological Naturalism; that, whereas the conscious presentation of the world in momentary awareness is a transient forceless phenomenon, the reality with which science and practice are alike concerned is extra-conscious being, "efficient influences, whose intimate nature remains unknown". This doctrine contains, I think, an important consideration; but it is enforced and worked out in such a manner as to be extremely misleading.

The important consideration is that, on analysing our beliefs with regard to the world of which we are conscious, we find that something remains that cannot be expressed in terms of consciousness, that is to say, something that is not a phenomenon. We believe that the world would exist though no organic sentiency were present in it, and when, therefore, it could not exist as a phenomenon; if two of us examine a coin we believe that it is one identical thing, though, as a phenomenon for us severally, it can only be the same, not identical. This belief in some non-phenomenal or extra-conscious, or transcendent condition of the world is inexpugnable: no philosophy has ever succeeded in suppressing or evading it. But, then, as soon as we attempt to use this belief to construct or explain experience, we are misled and deluded; for it is quite indefinite and cannot explain anything; and any appearance that it may offer of assisting in construction or explanation, is due to the paralogism of conceiving the extra-conscious being as a duplication of the phenomena. Hence epistemological Naturalism should maintain two propositions: first, the reality of a non-phenomenal world is a necessary belief; secondly, all knowledge or truth, in the stricter sense, is concerned with phenomena and the relations of phenomena. And thereupon it should proceed to construe the scientific categories, substance, cause, universal, subject and object, as they are applicable to the world of knowledge; should elaborate, that is to say, a scientific methodology.

But Dr. Montgomery, having established the first of these propositions, reverses the second; declares that in the phenomenon there is neither substance nor cause; refers us for the right understanding of the world to the extra-conscious reality, to "those efficient influences whose intimate nature remains unknown". And this is precisely the doctrine that most conduced to the triumph of the ancient scepticism: 'the reality of causation you admit to be unknown; so, in fact, it is unknown; and there is an end of your science'. It was by seeing this and, in some measure,

providing against it, that Berkeley became the founder of modern Methodology.

How can a man of extensive learning and penetrative insight overlook these plain considerations? To the best of my judgment, he does it by exaggerating the transitoriness and insubstantiality of immediate awareness; he errs with Plato. The language in which he describes immediate awareness is crowded with metaphors. For example: "All psychical or idealistic phenomenalism leads inevitably to unmitigated Nihilism, to a phantasmagoria of evanescent meaningless appearances, floating an instant in the unsubstantial media of subjective space and time, and vanishing again into the same vacancy whence they emerged. Nihilism is what consciousness in its own secluded sphere is exclusively freighted with" (p. 60). As for Physics, its immediate object of investigation is "a mere visual phenomenon" (p. 265). "It is clear that a world built of nothing but ephemeral stuff, such as conscious phenomena are really made of, would at best be but a dream" (p. 72). Many similar passages might be quoted, all tending to disparage empirical reality, or immediate perception, by reducing it to a vision or a dream. But what is a vision or a dream? Something incoherent when compared with empirical reality. For empirical reality is the standard, in comparison with which 'phantasmagoria,' 'evanescent appearances,' 'mere visual phenomena,' and 'dreams,' are felt to be unreal. After reading such passages as the above, let the reader fixate his inkstand (for every reader of MIND has an inkstand), and ask himself whether it is evanescent, meaningless, insubstantial, floating in subjective media of space and time, and so forth. On the contrary, it is quite steady, significant, substantial, objective. It may be investigated physically and chemically to your heart's content; and as you will certainly not finish the examination to-night, you can take it up again to-morrow. It is the plain truth that, from Plato to Dr. Montgomery, all who have disparaged the reality of the world of human perception have committed a gross fallacy of observation; they have perversely and persistently misdescribed the fact that stands before them. They have, I suppose, been led to do so either by misconceiving the nature of universals or by refined physical considerations. The latter, probably, is Dr. Montgomery's case; he knows that the cerebral processes corresponding to perception are in continual flux, and assumes that perception is similarly transient, contrary to the plain fact.

One wonders the more because Dr. Montgomery is, of course, well aware of the actual conditions of physical inquiry. "The vast array of biological facts," he says, "verifiable at all times by whatever competent investigator, has been collected by a host of close observers of sense-compelled percepts, and has not been excogitated by single philosophers from an ideal totality of Being conceptually hypostatised. The biological knowledge of our body is based on perceptual facts scrupulously ascertained by means of visual

and tactual awareness, etc." (p. 100; *cf.* pp. 126, 379). How would this be possible if sense-compelled percepts were evanescent, meaningless, insubstantial, floating in subjective space and time? Plainly the fundamental scientific categories, substance and cause, are somehow implicit in experience, and it is the business of epistemology to criticise and define them in relation to experience. As to the notion of Force, so important to Dr. Montgomery, Spencer, Schopenhauer and others, I cannot discover that in this volume it is anywhere criticised or defined; and in default of definition nothing is so ambiguous, so liable to become meaningless, insubstantial, subjective.

That substance, again, is to be derived from the metabolic process rather than from any other mode of objective experience, is a very questionable position. Recovery from a disturbance of equilibrium is not peculiar to organic substances. Many things that undergo disturbance without destruction are far more enduring than any animal organism. In fact, there is an opposition between the attributes of substance, identity in spite of change, and the conditions of memory. If the metabolic process resulted in the restoration of identity, memory could have no physiological parallel; for it requires, as some one has said, that every experience should leave "a scar," that the restoration should bear the traces of the disturbance.

The place of consciousness in Dr. Montgomery's world may seem precarious: apparently its function is, as Schopenhauer thought, to guide the organism: "it indispensably and exclusively serves as guidance in all our actions" (p. 363). But how can 'ephemeral stuff such as conscious phenomena are made of' give any guidance? What is the effective connexion between the guide and the organism guided? And how does he know the way? It is rather unkind of me to raise all these difficulties, and a poor return for the pleasure and mental stimulus that I have derived from reading this brilliant book. Perhaps my readiness to notice what I cannot agree with is influenced by the recognition that, as to the extra-conscious reality, Dr. Montgomery's view is the same as my own, and by my strong feeling of the dangers that beset that doctrine; how easily, on the one hand, you may step from it into Mysticism, or, on the other hand, into Scepticism. It is a narrow ledge, off which one easily topples into 'the intense inane'; and if I were to presume to give advice, it would be to mark the spot and come away.

CARVETH READ.

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*Thought and Things; a Study of the Development and Meaning of Thought or Genetic Logic.* By J. M. BALDWIN. Vol. I.: *Functional Logic or Genetic Theory of Knowledge.* London: Swan Sonnenschein, 1906. Pp. xiv, 273.

IT is difficult, if not impossible, to appraise the value of Prof. Baldwin's book, for the reason that it is only the first third of a

work planned to extend to three volumes, and constantly refers forward to 'vol. ii.' or 'vol. iii.' for the justification of questionable statements. This is obviously a practice to be avoided by a highly technical writer on difficult subjects, if he wishes to be intelligible. Hence it should be understood at the outset that our present account of Prof. Baldwin's aims and achievements is in many respects tentative and subject to revision.

Still it is possible to sketch the general plan of Prof. Baldwin's undertaking. He conceives it as the study of 'Genetic,' as opposed to 'Formal' and to 'Metaphysical,' Logic. This he regards as 'the Knower's Logic,' and as at the same time a 'Real Logic,' capable of explaining every stage of knowledge and of grasping "the actual movement of thought as instrument to a genetically built-up and evolving reality" (p. 13). What this conception includes may perhaps be gathered from the chapter headings. Chapter I. Definition of Genetic Logic: II. Progressions in the Cognitive Mode: III. Pre-logical Cognition: IV. Memory Objects: V. The Inner-Outer Dualism: VI. Semblant Objects: VII. Meaning: VIII. The Development of Meaning: IX. Negative Meaning: X. The Mind-Body Dualism: XI. The Subject-Object Dualism, which arrives at the logical judgment.

It will be seen, therefore, that in the present volume Prof. Baldwin only gets to the borders of what is usually called Logic. He promises to deal with the Genetic Theory of Thought in the second, and with the 'hyper-logical' functions (æsthetic and rational), with applications to Real Logic and philosophy, in the third volume. But he is no stickler for the term logic as applied to his genetic description (p. 18). This, as he rightly remarks (p. 38), rests its claim on its fruitfulness and "in so far as it succeeds, it will be its own justification": at present his aim is only "to introduce certain summary conclusions which are to be made pivotal in later developments, and which only cumulative considerations can in any sense finally establish" (p. 260). Unfortunately the present incompleteness of the work renders it impossible to forecast its success and to say how far it will meet this test. One can only wonder how Prof. Baldwin's formidable apparatus of technical terms and distinctions, which vies with Kant's in its complexity and difficulty, will work out in the end. Will he be able to control his machinery, or merely involve himself and his readers in its clutches? *Qui vivra verra.* Meanwhile his method has obvious advantages. He can postpone the final reckoning. He can put aside or evade any question he does not wish to discuss (*cf.* p. 37). He can tell us that dubious assumptions are only provisional and methodological. He can bid us persevere to vol. iii., if we would understand. He can demand to be heard out to the end and assure us that then all that now seems arbitrary, obscure, and unconvincing will become clear.

A critic, in short, must practically confine himself to enumerating the points which seem to him to be lacking in obviousness, and

begging Prof. Baldwin to explain them in the sequel. As such points may be mentioned *e.g.* (1) the identification of 'lower' and 'higher' with the genetically 'before' and 'after' (p. 20), and the difficulty (partly confessed on p. 102, *n.*) of really working out this temporal relation; (2) the putting of 'play' before 'meaning' and the representing of 'make-believe' as prior to serious activity (instead of regarding the former as derivative and subsequent); (3) the divorcing of 'meaning' and 'judgment' and its treatment as temporally prior to the latter; (4) the assumption, in general, of 'pre-logical' 'cognition,' and (5) the definition of all judgment as 'mediate'.

It will, however, also be pertinent to improve the occasion in order to reflect on the general status of the 'Genetic' method, and to point out what are the presuppositions of such a treatment of Logic as Prof. Baldwin attempts. It is clear, in the first place, that it cannot be *purely descriptive*. We cannot, that is, start wherever we like and rise by a simple and unmistakable route to the very apex of logical theory. It is one thing to start from introspection of adult psychic process and to observe how it now organises itself, and quite another to start from psychological observation of an infant or animal mind, and to try to interpret what we think we see therein. Clearly, moreover, there is occasion for infinite fallacy and confusion in the passage from one to another of these 'genetic' standpoints. Even, therefore, if we had definitely started by observing the genesis of knowledge in a human infant's mind—and Prof. Baldwin does not make it at all clear that such is his actual starting-point—we should still have before us a difficult problem of interpretation. What we observe will depend on what we have assumed, and are prepared to see and look for. Inevitably our general philosophical convictions and aims will colour our vision, select our 'facts,' and largely determine our descriptions. Thus the end we believe ourselves to have reached will be read back into, and therefore will be really prior to, what we take to be the beginning. So far, therefore, from 'Genetic Logic' being a way of avoiding logical controversy and of simplifying logical study, it will simply add to the list of alternatives a number of alternative ways of 'genetic' construction, which will seem acceptable or the reverse according to the critic's philosophic bias.

This is a complication which Prof. Baldwin appears to have overlooked. Nor are the *de-facto* presuppositions implicit in his descriptions of a particularly obvious or alluring character. He starts *e.g.* his 'pre-logical' cognitions from 'sensation,' which he conceives as merely 'given,' and assumes to be cognitive of 'objects'. Even on genetic principles this would seem to involve a twofold disadvantage. (1) It renders unintelligible and inexplicable the subsequent activity of selective intelligence. (2) By reading back into the beginnings of knowledge the conception of definite physical 'objects' which we have ultimately achieved, it utterly obscures the merit of this

achievement, by eliminating the difficult problem of the discrimination of 'real' and 'unreal' objects, and by blurring the important distinction between logical and real 'objects'. How thoroughly the whole description of the genetic advance to knowledge, *as it is experienced by the subject*, may thus be vitiated, may be gauged by an incidental remark of Prof. Baldwin's on dreams. He says (p. 203), "dreams are so bizarre or so detached from any 'real' context that they are discounted without more ado". However true this may be from the standpoint of the advanced psychologist, it is most certainly *not* true genetically, and forms a beautiful example of the 'psychologist's fallacy'. For genetically the discovery of the untrustworthiness and illusoriness of dreams has been a long and laborious process both in the child and in the race. Clearly, therefore, a philosopher who conceived 'sensation' differently, and regarded 'objects' as the end terms of a long epistemological process, which had differentiated them from 'sensations,' 'illusions,' 'memories,' 'fancies,' 'dreams,' etc., would arrive at a very different sort of 'genetic logic'. It may be predicted also that the 'passivism' which is inherent in Prof. Baldwin's account of the 'datum' of sensation and pervades also his account of memory (he never refers to *recollection!*), will prove no small obstacle in his path when he comes to justify the importance he attributes to 'selective thinking'.

It is clear, then, that Prof. Baldwin's is not *the*, but at most *a*, 'genetic logic,' and for this among other reasons, it does not seem possible quite to waive the inquiry whether it is, or necessarily leads to, a logic at all. Certainly to get anything like a genuine logic, questions of fact and of validity would have to be far more sharply distinguished than Prof. Baldwin attempts to do. For however thorough our 'psychologism,' however close we make the interdependence and correlation of logic and psychology, it can hardly be maintained that the mere recognition of a psychic occurrence is *ipso facto* sufficient to guarantee its logical value.

This difficulty is well brought out by Prof. Baldwin's treatment of the genesis of 'common' objects. He gives an elaborate classification of 'common' meaning under six rubrics (pp. 143-148), and yet almost wholly avoids the logician's crucial question, *viz.*, *How do we ascertain whether the meanings which claim and mean to be 'common' really are common, and whether the claim can be made good?* His sole comment on this problem is to say (p. 146) that "the limit of the meaning is seen in the fact that, from the psychological point of view, it may be mistaken; others may not share it as the meaning itself presupposes they do". *I.e.*, the meaning process as it is conceived in 'genetic logic' may always be wrong, but this 'logic' offers no suggestion as to how this wrongness may be remedied or its claim to rightness be tested!

It remains to note that the proof-reading has evidently been hasty and that misprints like 'Ehrenfel's' for 'Ehrenfels's' (p. 234), 'in-

tension' for 'intention' (in the phrase 'first' and 'second intention') (p. 266), and 'will' for 'shall' (pp. 138, 268) have an unscholarly appearance. Nevertheless, it must be recognised that the final verdict on Prof. Baldwin's work must be suspended, and the present writer for one will follow attentively his efforts to grapple with a very difficult subject, and will watch with interest how his 'genetic logic' works out on more strictly logical ground.

F. C. S. SCHILLER.

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*Reason, Thought and Language; or The Many and The One.* A Revised System of Logical Doctrine in relation to the Forms of Idiomatic Discourse. By DOUGLAS MACLEANE, M.A., sometime Fellow, Lecturer and Chaplain of Pembroke College, Oxford. London: Henry Frowde, 1906. Pp. xv, 583.

THE author of this book is occupied upon "an effort to strengthen and revivify Formal Logic . . . by bringing it into closer connexion with the living facts of thought and speech". He is of opinion "that both ancient and recent views upon various parts of logical theory require examination, and that the entire subject can be with advantage rehandled". And he is specially wishful to withstand the efforts of those "'new logicians' who hold that there can be reasons without Reason," and of those traditional logicians who make "the implicit explicit without the help of a middle term". The work is written for "any intelligent reader," repetitions are to be pardoned because the book is not one which is likely to be read straight through, and omissions are to be welcomed, as otherwise the reader might suffer from *ennui*. With regard to the repetitions no one will complain: in any philosophical subject they are of the greatest service in making the writer's position clear. Nor are there any serious *lacunæ* in Mr. Macleane's treatment of Logic, as he understands its scope and method. Many of his chapters, too, are characterized by their freshness of treatment of a well-worn subject. The ordinary lay reader will find the work decidedly of service in giving him an insight into logical doctrines. But the book on account of its want of succinctness cannot be recommended to the student, and the logical specialist will not find much in these pages that is new.

Perhaps we may say that Mr. Macleane's six hundred pages embody one of the last attempts that will be made to bring out all that is contained in the old syllogistic logic. That there is some utility in studying inferences with three terms no one with any due knowledge of that study can at all doubt, but to believe that such material constitutes the whole of Logic is to be under a serious misapprehension. That Mr. Macleane has quite failed to realise the significance of the generalised logic is apparent both from the fact that he hopes to revive logic on the lines above indicated and from

his actual references to Boole and the so-called mathematical logicians. It is asserted on pp. 393-4 that "we cannot, however, for a moment admit that logic is a branch of mathematics," and that it is not "possible to admit that Thought is really but adding and subtracting". Now mathematical logicians never asked that any such things should be admitted. If Mr. Macleane had studied the Introduction to Venn's *Symbolic Logic*, which has been accessible for a quarter of a century, these statements about the subsumption of Logic under quantitative Mathematics would never have been made. It would have been seen that + even in quantitative Mathematics does not by any means always indicate addition, and that the sign in Logic denotes something quite different from that process. Again a calculus is not necessarily something to do with numbers only. In general language it may be said to be a procedure that enables us by utilising certain rules to reach conclusions that reason, if it had been exercised upon the special material referred to in the problem, would have reached if it had proceeded correctly. Both the term Calculus and the symbols that are employed in quantitative mathematics may well be employed in logic, provided that it is always logical notions to which the term and the symbols have reference.

But Mr. Macleane has another complaint against the notion of a logical calculus. He argues that equational logic is at fault because, as Mr. Bradley says, "the process of reason does not consist in substitution". But this is no argument against the elaboration and employment of such a calculus. As long as correct conclusions are reached it does not matter in the slightest whether the procedure in the calculus is or is not the same as that which reason would adopt if it attempted the solution by its own unaided efforts.

At the same time I do not disagree with Mr. Macleane's doctrine that there cannot be reasons without Reason. I think that what he says on this subject is important. It is, therefore, desirable to point out that a logical calculus is quite compatible with the view which he here holds. At first sight it certainly appears that, if a conclusion is reached in the way that it is when the logical calculus is employed, we have proceeded not by any compulsion that Reason has exercised upon our thought, but in a quite irrational manner. Such, however, is not the case. Reason at the outset compels us to accept certain primitive propositions, and throughout the solution compels us to apply certain of them in certain cases. Having understood what is meant when the principles of the calculus are expounded we cannot but accept them as true, and having started on our process of solution we cannot free ourselves from the conviction of the propriety of applying those principles in the manipulation of our symbols. Reason is occupied at both these points, but it is *not* occupied upon any special material that may be symbolized.

After having argued that logical notions must not be dealt with by means of a calculus because this (1) is mathematical in character

and (2) does not represent the process of reasoning, Mr. Macleane gives up his position by declaring that "if algebraic or geometrical forms are applicable to logical propositions, it can only be on the side of quantity and extension". Now, with regard to this special statement, it may or may not be true, but the question will have to be debated much more adequately than it is in the pages of this book. It is asserted, for instance, that "the circles and other diagrams used to illustrate syllogistic mood and figure are imperfectly applicable to reasoning in intension". But there follows only an allusion to the old Eulerian diagrams (p. 394, *n.* 3). The author does not consider the improved employment of circles suggested by Dr. Keynes or the figures suggested by Dr. Venn. The proposition which Mr. Macleane mentions can, when regarded in comprehension, be very well represented by Venn's method. The truth is Mr. Macleane in his treatment generally, and, indeed, in so many words, makes obvious that he is entirely under a misapprehension as to the scarcity of specialists in Formal Logic. He asserts that they "have of late been almost as scarce as canonists or line-engravers". It would be the simplest matter possible to mention at least a dozen names of writers who have during the last few years treated special portions of Formal Logic. One is inclined to ask at what rate Mr. Macleane desires that logical specialists should be produced.

Within the limited sphere in which he works Mr. Macleane is, however, for the most part both sound and suggestive. This will be seen from a consideration of his statements that it is only when we go outside the *data* that our reasoning ceases to be formal, the subject of logic is rational consequence in thought, logic combats fallacy not falsity, logic is more directly concerned with judgments (which can be mistaken) than with concepts (which cannot), there is a rational compulsion laid upon thought, any ground of division is logically admissible, definition is subjective since the meaning or intension of a name is so, assertiveness admits of no degrees. Also he is with the majority of logicians in holding the doctrine that "induction is only the ordinary Logic applied in a particular way," and he brings out much better than many writers do the part that intelligence plays in selecting and arranging the materials for the deduction of a law (p. 530).

With regard to Mr. Macleane's elaborated doctrine that there cannot be immediate inference from a single proposition his argument may in the following way be shown to be invalid. He says: "But 'Some Y's are X,' implied in 'All X's are Y', can only be regarded as obtained inferentially from that judgment if the axiom that the greater contains the less be considered as a mentally supplied major premiss". Now, if this were true, it would follow that in dealing with three terms in (say) the First Figure we should require not merely the relation of the minor and major to the middle but also to have the *dictum* expressed as a premise. The

two premises, that is to say, would not by themselves warrant our drawing the conclusion. Thus a two-term argument is an argument with more than two terms, and a three-term argument one with more than three terms. That is to say, reasoning which is syllogistic is asyllogistic, which is absurd. The truth, of course, is that the relation of the three terms in a syllogism is intuitively obvious, and that what is intuitively obvious is expressed in general language (in the First Figure) by means of the *dictum*.

In conclusion it may be observed that this book contains a large number of examples, selected from many subjects and from several languages. There is no Index—a fact which in such a large volume is to be regretted—but there is an admirable Table of Contents.

A. T. Shearman.

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*Morale des Idées-Forces*. Par Alfred Fouillée. Paris, Félix Alcan, 1908. Pp. lxiv, 384.

To treat any topic in terms of "idées-forces" is necessarily to place oneself at the psychological point of view. It is, for that very reason, in M. Fouillée's judgment, to place oneself at the most effective of all points of view for the statement of the ethical thesis. Here, "remplaçant partout les entités transcendantes du dogmatisme par des pensées qui se réalisent" (p. xiv), we are to find ourselves on firm scientific ground, and still to be at a heart of things which biological and sociological considerations fail in themselves to reach. Mere "évolutionnisme" we supplement and correct by reference to the inward consciousness of ends. We can dispose of the paradox of an ultimate aspiration after unconscious automatism—such as that of Nietzsche—because, as reasonable psychologists, we can see how its attainment would exclude all appreciation of attainment.

The reader who turns over the pages of *La Morale des Idées-Forces* in comfortable irresponsibility, free from the necessity of pressing upon their contents with his own groping conjectures—in order to co-ordinate them into sufficient definiteness for criticism—may enjoy the lithe motion of the exposition without being bewildered by its elusiveness: he will find topics of modern interest treated with sanity and acuteness: the intellectual illumination will here and there gather for him into brilliance: and he will find himself in the presence of large and suggestive, if not always securely balanced, ethical conceptions.

The main division of the work follows the line of the primary divisions of psychology. Part i. deals with "Éléments Intellectuels de la Moralité," and the two books of part ii. take up respectively the "Éléments Sensitifs" and the "Éléments Volitifs". The last chapter of the book on "Éléments Volitifs" is devoted to "La Culture Esthétique"—a fact which may be construed as

a warning of difficulties in the work that are not inherent in the subject.

More obviously at home in this section of the work is the theory of liberty "conciliée avec le déterminisme". The object of this theory is to restore "au sein du déterminisme même, l'idée de *puissance* indépendante" (p. xxii). The theory is not now stated for the first time by M. Fouillée, and does not, his remonstrance suggests, now for the first time baffle a reviewer. Liberty "n'est pas une donnée initiale de l'humaine nature, une sorte de puissance toute faite". It is "une conquête *finale* et ne peut s'acquérir que *progressivement*" (p. 274). In this progressive realisation determinism itself, not reduced to "lois *mécaniques*," but following "lois *psychiques*" (pp. 272-273), becomes "par l'idée même de liberté, un instrument d'expansion et de délivrance" (p. xxii). I do not know how far M. Fouillée would feel that a genuine precipitate of his theory had formed in a mind fain to define its essence thus: That in the very business of conceiving the idea of liberty and independence, as a necessary object of desire, consciousness is reflectively so thrown back upon itself as to begin gradually working out the reconstruction of its own content and tendencies—thus determined to be increasingly its own determinant.

Seeking the base of moral existence, we learn (p. ii.), that "la moralité se fond elle-même en se concevant et se conçoit par le seul fait que nous sommes des êtres conscients". "Le *seul* fait." Every essential of morality, then, can be scientifically derived from the fact of consciousness—or rather, presumably, self-consciousness.[1] And yet, can it? For in the preceding sentence we have had *two* doctrinal bases assigned—"le *fait de conscience*," and "*l'idée-force* de moralité"; and I find no clear determination of their relation. That the "idée morale" is directly *derived* from the "fait de conscience" (p. xxxviii), does not quite settle the doubt, for derivation may be direct without being so immediate as to exclude the necessary co-operation of some other principle unnamed. And if such a principle *be* excluded, why are the bases dual? The "fait de conscience" would be itself sole and sufficient base. Now whatever sort of differentiating principle so seriously intervenes between "la fait de conscience" and the derived "idée-force de moralité"[2] as to constitute them distinguishably *two* bases for ethics, has surely a function sufficiently important to be more than tacitly implied. Must it not be, if such be its case and office, itself a deeper and

[1] M. Fouillée does not define his attitude to the distinction between "conscience" and "conscience de soi": and I am not sure how far he draws it. On p. 69 "la conscience" appears itself to be "réflexion sur soi". But on p. 30 it is "la conscience de la conscience" which becomes "*l'idée* de conscience".

[2] On p. 30, the "*idée*" (not "*fait*") "de conscience" is "en morale, l'idée-force fondamentale". Whether it then is identical with "l'idée-force de moralité" is still an open question.

more independent second base than that which it helps merely to *derive* from "le fait de conscience"?[1]

On p. ix we are introduced to the "idées fondamentales de l'éthique, dignité, valeur, bien," and so on. These ideas are a discoverable content of a normal human consciousness, and certainly they could not exist as they do without self-consciousness. But are they so derived from self-consciousness as to require no other constitutive principle, of equal or superior moral importance, for their explanation? For example, it is self-consciousness, enabling us to exist to ourselves, that makes possible the inward formulating of the demand on our part that we shall be "respectés". And it is true, as M. Fouillée very tellingly observes (p. xiii), that in virtue of this very demand we inevitably become entitled to respect. As he puts it, "La volonté d'être respecté rend respectable". But granting such relatively self-sustaining efficacy in this moral idée-force, is it due to its formulating or to its content? Presumably we cannot deny a share in the efficacy to the latter. Then it becomes a crucial question: does self-consciousness really account not only for its formulating, but for the whole *moral content* thus formulated? Is self-consciousness the sufficient and exclusive ground of its tendency and significance? Or, on the other hand, does that content, in some degree otherwise determined, dignify self-consciousness with an office and significance weightier than it could have possessed, save as lending its animation to such a content? These alternative questions involve an issue of crucial importance for settling the true ethical standpoint. The ambiguity which I have tried to signalise leaves their decision at hazard.

After book i. has dealt with the Moral Subject, book ii. deals with the Moral Object, and the theory of Objective Values. Such values can, it appears, be constituted, *e.g.*, by the degrees of development attained in themselves by physical organisms (p. 110). The aim seems to be to show a harmony between the moral idea and cosmic conditions, in the absence of which the moral intention would remain void (p. 106). But the addition of such a "fondement cosmologique" to our "fondement psychologique" looks a very grave one. If the immediate need of it has to be admitted, the assured self-founding of a morality conceived as essentially a matter of our consciousness does not seem to be availing us very far in the process of actual ethical structure. We have seen that it is not made so clear as it might be whether our author does intend to commit himself to depending purely upon such self-founding

[1] The indefiniteness in which the matter is left may be further illustrated from the fact that on p. lx we are told that the origin of the moral idea *cannot* be completely determined: but are free to conjecture whether this is only because we cannot discover the origin of consciousness (p. lix), or whether it also involves us in hesitation as to the entire origination of the moral idea by consciousness. To say that consciousness is "le germe" of the moral idea (p. lix), only leaves the case hanging on the interpretation of a metaphor.

or not. Our suspicion that the untrammelled advance of this speculative enterprise requires exclusive regard to one side of an ambiguity, while its apparent security assumes the quiet sustaining influence of the other, recurs.

Under the notion of "Rapport du Sujet à l'Objet," the third book substitutes, in accordance with the self-engendering aspect of the moral system, a theory of a "Persuasif Supreme"—of our moral self-persuasion—for that of a Categorical Imperative. The ultimate shortness of ethical reach inevitable, I believe, in any system which is not at bottom vital rather than legal, is justly signalised by saying, "La suprême expression du bien n'a pas lieu en termes de loi" (p. 192). In contrast elsewhere (on p. 23), there is presented, as Christian and Kantian, the conception of "une *nature* tout égoïste" associated in man with "une *loi* supra-naturelle, différente de l'humanité même et de notre conscience propre". But surely this conception, so far from answering to a Christian estimate of ethical possibilities, rather has affinity with the very situation which Christianity essentially condemns, in order to supersede legal relations by fulness of life. The ethical principle here, however, is free from the impossible conceptual confinement from which M. Fouillée's principle rebounds into ambiguity; since it is not only inwardly vital, but at the same time quite avowedly *responsive*.

The topic of book iv. is "Rapport des Sujets entre eux". Society is hyper-organic. Organically the good of the part is related to the good of the whole: but socially the good of each part and the good of the whole are identified.

The fundamental discussion of "altruisme" is, however, rather assigned to the first book, as belonging to the analysis of the Subject.

The formula *Cogito ergo sumus*—modelled on the declaration of Descartes—is given as being simply an expression of the fact of consciousness (p. ii). Conscious intelligence is by its very nature a principle of *désintéressement*—a doctrine which I question in itself less than I question its ethical force and availability.

I submit that it is just the peculiar individuality of feeling-consciousness that gives chief meaning to self-sacrifice, and makes the ethical problem what it is. Our intelligence, to the extent that it is viewed abstractly, and as it were *de-personalised*, seems to flatten out into an appearance of negative impartiality which we, as concrete individually-feeling personalities, do not really possess. What is more, if we turn from theory to actual life, and examine ourselves as in the midst of it, we may find that the kind of impartial disinterestedness which suggests itself as natural to abstract intelligence is one that would never adequately take possession of *us*, in the warm depths of our human capacity. Of course, if ideas can absorb into themselves the functions of the whole mind—and we find the idée "jouissant de la conscience qu'elle a de soi et de l'acte par lequel elle se pose" (p. vii)—and the entire personality is recon-

structed as itself just a system of idées-forces, it becomes more or less conceivable how such a system might have, and have as a sufficient expression of its fullest life, something of that aspect of impartiality which would belong to an impersonal intelligence. And for M. Fouillée, ethical values being essentially impersonal, personality has worth just in the degree of its impersonality (p. 233). But the ethical problem of unselfishness is not solved by showing how, supposing the entire life were interpretable on the scheme of intellectual concepts, that problem would disappear.

We are assured, on p. 241, that "la nature à la fois individuelle et universelle de l'intelligence" *does* imply "la nature à la fois individuelle et universelle de la sensibilité même". But can we so merge the profound difference between the two cases? That element in thought which we can share universally—the communicable element—include what may be regarded as its *essence* from one point of view. In reference to feeling *we have no such point of view*. I doubt if a theory of epistemological necessities, and "satisfactions de notre intelligence," can span the width of the fine psychological paradox, or gather to itself the ethical fascination, involved in the aspiration after unselfish love.

HUBERT FOSTON.

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*Das Erkenntnisproblem in der Philosophie und Wissenschaft der neueren Zeit.* ERNST CASSIRER. 2 vols. Berlin, 1906, 1907.

CASSIRER claims to bring to a focus the multifarious intellectual activities of the period from the Renascence to Kant, by the recovery of the point of view from which the development appears as a unity, and from which alone, therefore, its solution, or contribution to solution, of its problem admits of adequate appreciation. The solidarity of the principle of the method of modern science with that idealism which has for its keynote the notion of continuity of function is complete and fundamental. If it appears a far cry from the differential calculus to the use of universals in knowledge, or again from the doctrine of absolute space to the ontological proof, the reason lies in divergent ability to make technical use of the instruments proper to the two spheres of manifestation, and in consequent failure to appreciate the bearing of inquiries, apparently remote, upon our own artificially limited interests. If we cannot understand Descartes or Leibniz alone without such reduction to unity, still more is this the case, when following back and forth the threads in Leibniz' web, we need to find a place for Galilei and Euler, for example, in the same organic system with Henry More and Crusius. Cassirer comes to the historic task with a firm grip on the principles of science and of philosophy in their real unity mid apparent diversity, with an adequate mastery of the modern languages, and with a marked historical sense. The result is a measure of success upon which he and his readers may be well congratulated.

In the earlier portion of the work special excellence belongs to the sections on Galilei and Kepler, the *Belegstellen* being chosen with particular care and relevance. The chapters on Nicolas of Cues, with its debt to Uebinger, and on Campanella, and the slighter sections on Valla and Ficinus are also attractive. The most instructive individual passages are the elucidation of the text *ubi materia, ibi geometria* and the wholly admirable discussion (vol. i., p. 134 *sqq.*) of Zabarella's anticipation, from within the limits of a reformed Aristotelianism, of the *metodo risolutivo*. The nature of Galilei's advance upon this *inductio demonstrativa*, through his control of the mathematical instrument and his familiarity with modern instances, is shown with enlightening clearness. The transition from the induction of fact to an inductive method, the rejection of empiricism for an experientialism whose key is analysis, gains much in intelligibility.

On some of the ἀγεωμέτρητοι I venture to think that Cassirer is not so successful, probably through a defect of sympathy. In general it may be said that, unless an author is either a pioneer in the mathematico-physical advance or offers something in the way of an anticipation or of point of departure for some later thinker of importance, he tends to get at most a fair field from our author, but in any case no favour. Campanella escapes because he is regarded (vol. i., p. 226, rather against the dates, v. Hoffding, *Hist. Phil.*, E.T., i., 154) as a link between Augustine and the Cartesian *cogito*, and again as the manifest influence at work upon Spinoza in the stage represented by the *Korte Verhandeling*. Cassirer's note with confirmatory references and passages, vol. ii., pp. 621-625, is quite decisive here for Campanella rather than Bruno.

Certain other sections miss fire somewhat from the fact that Cassirer's knowledge of Aristotle is so overlaid with later learning that an Aristotelian explanation never naturally suggests itself in the elucidation of a doctrine. The passage on Bovillus (vol. i., p. 82 *sq.*) should have connected with the *De Anima*, rather than with the general Aristotelian view of substance. The reference in Locke's 'sensitive knowledge' to αἴσθησις κατὰ συμβεβηκὸς is missed. The lack of grip in p. 109 *sqq.* on the reform of the Aristotelian psychology, with some positive inaccuracies, as when δόξα is described as a stage between sense and imagination, tends to mark this limitation. After all no historic period is more than relatively self-contained.

The sections on the Cartesians are especially good. Here Cassirer is in part upon ground which he has traversed before, but nothing of what he here gives could well be spared, save perhaps the portion dealing with Burthogge. The Oxonian serves as a link, doubtless, between Geulincx and Locke, and, while ΤΑΓΑΘΟΝ and *Vindiciæ Pædo-Baptismi* are not rare in libraries, the more important books are hardly to be had, but he is merely the docile pupil of Geulincx. The latter's *criticism* and its limitations are excellently treated of. And Malebranche, who rather than any of the English school is

the true father of psychology, is very worthily presented. The extent and the limit of Hume's debt to him is well defined. The verdict on Pascal, who had the clue and turned his back on the solution, is characteristically severe.

Of Spinoza the most striking fact noted is the relation of his conception of genetic definition to that of Hobbes, whose influence upon him has heretofore been regarded as confined to political theory. Apart from this point and the note as to Campanella already referred to, the treatment is rather adequate than illuminating. Of Leibniz Cassirer has said his say elsewhere. (See MIND, N.S. 46, April 1903, where Mr. Russell takes a view less favourable than the present writer's of Cassirer's use of the material available through Cantor.) Leibniz finds a forerunner, as Cassirer thinks, though scarcely one that influenced him, in Herbert of Cherbury with his *analogia*.

The English school from Bacon onward, in its main experiential line of development, suffers a little by being put after Cartesian or semi-Cartesian writers not earlier in date. Bacon is on the whole the conventional Bacon of the tradition, the light that failed. Locke, too, does not succeed in thoroughly interesting Cassirer. Is there a critical element in him, and was he influenced therein by the Cartesian circle? and so forth. What are his views of substance, time and space, mathematics generally? Cassirer, perhaps from avoidance of Riehl's sphere of influence, contributes little to the general understanding of Locke. He is, one may venture to think, wrong in saying that Locke had no definite theory of innate ideas in view in his polemic. Surely he thought that he had Herbert. We are inclined to think that the use which Cassirer makes (vol. ii., p. 199) of the phrase as to simple ideas and relations in Locke's Essay ii., 21, § 3, though verbally valid, is, if regard be had to Locke's essential meaning, really an irrelevance. Hume, too, whether from lack of sympathy or from the conviction that he has been abundantly presented to the German reader elsewhere, is something of a conventional figure in Cassirer's hands.

On the other hand Hobbes and Berkeley meet with sympathetic insight and the chapters on these two thinkers are admirable. The rationalist side of Hobbes, his definition of cause in its relation to Bacon's *forma*, his genetic principle already referred to, his definition of *conatus* with the idea of the infinitesimal trembling on the verge of discovery, his deficiency in technical mathematics which leaves him ultimately side-tracked—these are well brought out. In regard to Berkeley Cassirer sees the function of representation, which has been adumbrated in Fracastoro, and which comes to fruition in Kant's schematism of the categories, first find its definite place in Berkeley's treatment of abstraction. Starting from this point he makes the transition to Berkeley's later idealism much more plausible than it usually looks to be. The thing that is inevitable is not the advance towards the Humian position but the break with sensationism.

This view perhaps somewhat ignores the effect on Berkeley's system of that visualisation or pictorial representation which Ribot has somewhere noted as a marked psychological characteristic of his mind, and which is a help towards understanding the naïve part he takes in the mathematical controversies of the time. But it is at any rate grounded in the fact that Berkeley had reached the definite difficulty which, as Cassirer holds, Kant intended the schematism to resolve, *cf.* vol. ii., pp. 570 *sqq.* A further novelty in Cassirer's account of Berkeley is the position, justified with confirmatory passages and references (vol. ii., p. 670 *sqq.*), that Kant's Berkeley is not the Berkeley of the *Principles* and the *Three Dialogues* but the Berkeley of the *Siris.*

In this division of Cassirer's work the failure is the chapter on Gassendi. His references to ancient atomism are otherwise hesitating in tone. The view, *e.g.*, of Democritus, vol. i., p. 298, is correct, but is discounted by a different conception, vol. ii., p. 138. And that this is perhaps a vulnerable spot in Cassirer's wide and accurate learning is made more probable by the failure to discriminate where Epicurus is before the court and where Gassendi, when dealing with the latter.

Outside the empirical school we have discussions of Herbert, Digby, Collier and others. The way in which Collier reached his idealism through the antinomy as to infinite division is well shown. The philosopher who comes least by his own in this section is Reid. Reid is affiliated to Lord Herbert, but treated, if that is consistent, as offering merely a psychological solution. The significance of Reid's presentation theory of perception is quite missed, though from the point of view of Cassirer's own idealism surely of grave import, but naïve realism, and philosophy of common sense are names that Reid's speculation seldom can make headway against. The paradox of Prof. Pringle-Pattison in *Scottish Philosophy* that Kant is in substance contained in Reid would be indeed news to our author.

A section of great interest is devoted to the carrying of the development a step further in its scientific aspect. The controversies in which Berkeley and Leibniz, Henry More and Newton were involved as regards the nature of space, the disputes in which the ark of the Lord was, or was supposed to be, in some sense carried to battle, involve a chapter in the history of the epistemological development which is rarely so clearly presented before the philosophical reader as here. We are working towards the understanding of how Euler and others, with their bringing to light of what was involved in continuity, infinity and the like mathematico-physical rubrics, paved the way for Kant.

The chapters on the preparation for Kant and Kant's development in his precritical period are among the most noteworthy in the book. The enormous amount of labour that has been bestowed on Kantian exegesis according to the exacting canons of the last generation has

been faithfully utilised as material for a sane selection, and in place of the generalities as to Leibnizio-Wolffian dogmatism and the like, dear to the hack University lecturer, we know how to put Lambert in his place—it has got gradually lower within living memory,—and are given a very clear presentation of the effect of Crusius on Kant with much more of the same type. Cassirer holds that Hume's influence has been both exaggerated and placed far too early. He dates the passage in the *Reflexionen* which derives causality from activity as late as 1764-66. Kant's first restiveness and tendency to move in the direction of the problem of pure experience must be held to be motived not by a Humian stimulus but by an impulse from the general scientific movement. Kant carries to Hume a point of view won from contemporary or *pæne*-contemporary natural science in the hope to find it philosophically grounded. He finds his hope frustrated, but certain phases in Hume's version of problem give him pause, and enter as the to-be-criticised into the circle of his thought. Surely this is substantially right.

The chapter on the Critique shows how in the Kantian system, the principles of method, and the lines of solution of departmental problems, immanent or explicit in his predecessors, were precipitated in a unity which was the end of one state of development and the beginning of another. The transcendental ideality of space, the clue given by the mathematical synthesis *a priori*, the schematism, the thing in itself, to be justified—on a line of defence suggested by a phrase of Simmel's—by its function in knowledge, not as existence outside knowledge, are the points most fully developed and insisted on. Cassirer will have nothing to do with the treatment of the schematism as a bridging of the cleavage between sense and understanding, as if these were clearly two, nor with the position that the doctrine of the noumenon is a recognition of an unresolved dualism. He rejects too the stressing of consciousness in general in the way which pressed to its logical conclusion means back to Spinoza and forward to Hegel. In his interpretation he might indeed be right as to Kant's essential meaning, but he makes too little, perhaps, of *lacunæ* that Kant saw to be such, but left provisionally unfilled. It is good to point out, as Cassirer does, that *phænomenon* in the scientific manuals of the period immediately preceding does not imply a separate something to appear, a masked reality which is other than it seems. It is perhaps not so good to discount the statement as to the dualism of sensibility and understanding (*Kritik*, ed. 2, Introd., § 29), and to compare the thing in itself regarded as a limiting conception to the horizon (vol. ii., p. 597) with consequent presumption of its shifting nature, its relative character. But the time-honoured controversy of *ad vertum* and *ad sensum*, of the limits of 'sympathetic' interpretation and development, is not to be solved to-day nor to-morrow.

Of the detail of this section a good example is the proof that the distinction of *extended* as an analytical predicate of to-day,

heavy as a synthetical was derived from the teaching of the Newtonians.

¶We have given but samples of the range of Cassirer's inquiries, the qualities of his work and their compensating limitations. Of Telesius and Bruno, of Montaigne, of Pico, of Maupertuis, of Boscovich and the rest, he has much to say and that much worth the saying. And the references and adduced passages are sufficient and not bewildering. That his contribution to his subject is solid and rich in novelty, both as to the angle from which it is viewed, and as to the spoils which a connoisseur's industry has amassed, should be obvious. In his determination to bring into an organic unity the science and philosophy of a 'great year' he has shown here and there that he is not omniscient. And his organising thought has caused some writers who deserved a more central place to drift into the marginal fringe of attention. But he emphasises throughout that the problem of knowledge must find its solution within knowledge itself, that immutable substantial forms as understood by the Aristotelianism of mediæval orthodoxy have been perforce giving way to concepts regarded as functions, where what is constant or continuous is principle, with often reversal of results. He shows the parallelism of aspect, merging in essential identity, of this development on the one hand and the evolution on the other of the method of analysis which has conquered nature by obedience and achieved the *regnum hominis* of which Bacon, because ἀγεωμέτρητος, did but dream. And he has worked it solidly out in its history from the confusion which ensued upon the definite bankruptcy of Scholasticism down to the transitory pause that ensued upon the triumph of the *Critique of Pure Reason*. And hereby Cassirer has achieved a place peculiarly his own.

A conspectus of the writers treated of, with their dates, and an index are to be desired.

HERBERT W. BLUNT.

# VII.—NEW BOOKS.

*Elements of Psychology.* By SYDNEY HERBERT MELLONE, M.A., D.Sc., and MARGARET DRUMMOND, M.A. Edinburgh and London: William Blackwood & Sons, 1907. Pp. xv, 483.

THIS book is described in its preface as primarily "a contribution to the teaching of psychology," and it seems on the whole admirably fitted to its purpose. Its style is clear and simple, especially in the earlier introductory chapters where the difficulties of the bewildered beginner appear to have been kept especially in view, while further on, where the mind of the student may be supposed to have grown suppler to its task, problems are opened up with less caution and restraint. One point in the authors' work which particularly suggests intimate acquaintance with the efforts of beginners is the exceedingly careful way in which terms are explained; the ambiguous usages in common speech of those words which psychology has appropriated to special purposes are analysed in a simple and illuminating fashion. The authors are particularly happy in the use of quotations. In the teaching of psychology it seems especially necessary to seek wherever it may be found the strong illuminating phrase that may act as a revelation, and not to say in weaker words what by a happy inspiration has once been thoroughly well said. The book gives a good illustration of what may be done in this way. Besides the frequent quotations from the work of other psychologists, there is an extensive system of references. The authors speak of having had in view "the treatment of the subject usually required by the course of instruction for the Ordinary Degree in British Universities and Colleges," but they have wished at the same time to show the 'open door' to any further line of study that may appeal especially to the student. A feature that would make the book particularly helpful to one studying without a tutor is the plan adopted of giving at the end of a section, in addition to the references, notes upon the discussions referred to. These notes may occasionally strike the reader as unpleasantly dogmatic; as for instance that on page 243, where the treatment of sympathy by Ribot and by Mr. Shand seems to be rather harshly dismissed because their usage of terms differs considerably from that approved by the authors. Often, however, the comments are suggestive, and, regarded merely as supplying the sort of temporary guidance that a tutor might give, they should undoubtedly prove of value. The book is provided with an index, and in a special note the student is reminded that it should be freely used.

While its many quotations, references and brief reviews of special arguments and lines of work give to the book a somewhat encyclopædic character, some of the later chapters becoming even a little unwieldy through their inclusiveness, yet there is a pervading unity of standpoint from which different results are discussed. The authors' interest would seem to lie on the philosophic side of psychology; or perhaps one might

better say to attach to the mind itself in its higher manifestations, rather than to those outworks of the mind that can be carried more easily by the attacks of physical science. "It is no more possible," the authors remark, "to write a book on psychology as a whole than to write one on mathematics as a whole" (p. 24). It is the main elements of analytic and genetic psychology that they undertake to expound. It is noticeable that while numerous references are made to experimental work in psychology, yet the authors do not seem to place quite the emphasis upon such work that is found in many modern text-books. In the chapter upon the different branches of psychology, experimental psychology is considered in the last section together with physiological psychology. The reader is warned against identifying the two, but in terms that suggest that the authors feel there may be some excuse for such identification. "Finally the student should bear in mind that experiment is not limited to the physiological accompaniments of mental states. It is possible, though very difficult, to devise experiments which throw light on the laws of association and revival of ideas, and even on those of the higher mental processes" (p. 33).

The special standpoint of the authors makes itself felt in departure from the arrangement customary in older text-books, according to which the discussion of sensation and the intellectual processes precedes that of emotion and volition. In the plan here adopted mental activity is discussed in two chapters immediately following those devoted to introductory and general considerations; while chapters on the sense feelings, the emotions, and the general conditions of pleasure and pain follow the treatment of activity and precede the discussions of sensation, memory and the different forms of intellectual construction. This arrangement is described in the preface as partly a device for the assistance of the student, who can assume more naturally the introspective attitude towards his activities and feelings than towards the facts of perception, while it is also the outcome of the view of knowledge as essentially a creation of the mind interacting with its environment. The logical difficulties of the arrangement cannot but be felt at certain points, especially perhaps where the sense feelings are discussed prior to any methodical setting forth of the characteristics of sensation. Still, as the authors remark, whatever order is adopted the difficulty must be experienced of treating separately of processes so intimately connected. The arrangement certainly helps to give emphasis to the authors' view of the strictly mutual relations of dependence between feeling, conation and cognition, and to counteract the tendency which has so often appeared in psychological exposition for the intellectual function to assume a distinctly dominant place in the interpretation of consciousness.

Throughout the book constant reference is made to physiological conditions, and a short physiological glossary is appended. In considering the physiological accompaniments of imagination and memory, the hierarchical conception of the nervous centres is emphasised as particularly suggestive (p. 416). The authors are, however, as might be expected from the general trend of their intellectual sympathies, keenly alive to the danger of representing a statement in physiological terms as in any ultimate sense an explanation of a mental process. Their attitude in regard to this point appears most clearly in the discussion of those 'dispositions' to which psychologists are compelled to refer in describing the influence of past upon present mental process. It is declared at the outset that these dispositions are mental (p. 47), and in subsequent references the authors refrain from presenting them, after the fashion of some writers, in almost exclusively physiological terms. In the chapter upon Mind and Brain the nearest approach is made to the

metaphysical considerations that must determine our view of the actual nature of these dispositions. Consciousness or purposive activity is said to be the fundamental reality. "The activity of the brain cells—in the last resort the molecular motion in the brain—" might be regarded as "simply the mode in which consciousness manifests itself to our senses, or would manifest itself were it possible for us to see or touch a brain in action" (p. 88). But the real difficulty arises from the scientific contention that all mental changes can be represented under a mechanical aspect. "If it be possible for any series to present itself continuously under a mechanical aspect, then it must itself be in its nature mechanical and in no sense self-determinative" (p. 89). The answer given is that man's life is not ruled by mechanical laws throughout. At certain "initial points the course of mental change is not mechanical, determined from behind; it is purposive, determined by ends or ideals". This cannot be proved, but "any other view is so unintelligible that we should decline to accept it in the face of almost any so-called proof" (p. 91). This has obviously an important outcome for the treatment of the special problems of cognition; the authors do not, however, in their chapters on mental activity, bring out any sharp distinction of kind between ideo-motor or habitual action and acts into which voluntary attention enters. In the very simplest form of life, it is said, there is an element of self activity. We experience such activity in its lowest form in our own life as "felt tendency". The point which seems to be insisted on is that wherever the marks of inward unity and purposiveness appear there we pass beyond the domain of which natural or mechanical laws could give complete account. We must "image the nervous current as caught up in the life of the cells, as transformed and transfigured by that life, and then sent forth to fulfil the purposes of that life. The life here referred to is the life of the cells as a whole—that is, it is the life of the mind; so only in the mind is the unity of the brain to be found" (p. 183). Thus throughout the exposition of the different forms of mental process, wherever reference is necessary to psychological dispositions as determining emotional response, action, perception, recollection, the student is led to think of these dispositions as parts of the self, of a spiritual being, not a 'single substance,' but a thing "of infinite complexity" (p. 468). It is significant that the last chapter deals with the self, summing up many of the results of earlier sections, explaining the reality of the self as "found in what we have called psychological dispositions, the bodies of knowledge, the habits of thought, feeling and action in their sum total" (p. 448), and again "consciousness may be called the doorway of the mind or self"; an inlet and outlet, but palpably "inadequate to the self as a whole" (p. 465).

The student who had followed up closely the various problems to which the authors offer guidance, and grasped the conception which they present of the developing self, should certainly have attained an attitude both disciplined and eager toward further reflexion, observation and study. The book closes on the note of progress. "The essential nature of mind consists in its creative functions, which are inexhaustible."

A. M. Bodkin.

*American Philosophy: the Early Schools.* By I. Woodbridge Riley, Ph.D., Johnston Research Scholar in Johns Hopkins University, sometime Professor in the University of New Brunswick. New York: Dodd, Mead & Co., 1907. 8vo, pp. x, 595.

The history of American philosophy has recently been the subject of a considerable number of partial monographs, but the only comprehensive

survey of the whole field has been van Becelaere's *La Philosophie en Amérique*. History as written by foreigners, however, though often notably suggestive, can in the nature of things seldom be final: the foreigner may easily see points that by their very familiarity escape the native's attention, but he can hardly see things in their proper proportions. Prof. Riley's book will therefore be welcome to English as well as to American students of philosophy. It is the first volume of a series, and covers, roughly speaking, the eighteenth century and the first quarter of the nineteenth. It is well printed, though on rather too heavy paper, but is—a sad defect—unbound.

The order of treatment is by 'isms,' not chronological. After a preliminary survey, we find Puritanism dealt with in Book I., and Idealism, Deism, Materialism, and Realism in successive books. It is easy to argue both for and against this method, but clearly there is the disadvantage that contemporary writers become widely separated. Thus Samuel Johnson's controversies with Cadwallader Colden are mentioned on page 97, but the account of Colden himself is not reached till page 393. A chronological table, a compact bibliography of each writer discussed, and an index, are therefore indispensable, but the first and third of these necessities are here altogether lacking, and the bibliography is by no means compact. A very little extra trouble would have made the book a serviceable work of reference, and that it is not at present. In the second edition, which it will soon no doubt deservedly reach, these defects may be remedied without much difficulty.

The book is well written. There are rather too many references to the appreciations or depreciations of different thinkers by other historians or commentators, and there are occasional curiosities in punctuation which may be regarded as a natural result of the study of a period so careless in that respect; but otherwise the paragraphs flow easily, and in contrast to a good deal of recent American writing in philosophy they carry an evident meaning. It would be an exaggeration to say that Prof. Riley has written a vastly interesting or enlivening book, but that is the fault of his material. Truth to tell, he records for the most part the views of a very dull set of men. Leslie Stephen made even the Deists interesting, and no men can really be duller than Deists, who are always talking of God and always thinking of themselves; but Leslie Stephens are not to be expected often, and when Prof. Riley lights on a thinker of real mark, he does not spoil him.

As was usual, philosophy in America at first depended partly on current theology, partly on a reaction against it; but the peculiar condition is worth noting, that the current theology was, in spite of minor sectarian differences, almost wholly Calvinistic. Samuel Johnson, indeed, entered the Anglican Church, but otherwise that Church was not apparently influential upon early American thought, and the relative homogeneity of theological views gives point to Prof. Riley's contention, that his writers were not mere copyists. "Men did not pick up whatever happened to be within reach, they selected and chose what best suited the real cravings of their nature." In a sense this is always true in philosophy, for no one would trouble to philosophise if he did not get anything he wanted for his pains, but the special conditions of American thought and life at the opening of the eighteenth century are clearly reflected even in the debts that the first American thinkers incur. Still, on the whole they borrowed very freely; they "had but little influence on the main currents of the world's speculative thought," but they had very nearly as much influence as they deserved to have.

The pair of "idealists" are the most interesting. The name of Samuel Johnson is familiar to students of Berkeley, from whom he learned his

philosophy. Campbell Fraser gives a short account of him in his edition of Berkeley's works (iii., 390-393), and prints two letters from Berkeley to him (ii., 15 ff.). Prof. Riley now gives us the other side of the correspondence. The points in Johnson's first answer which are not treated in Berkeley's first reply, as we have it, are (1) that the "real original and permanent existence of things" must on Berkeley's own view be "Archetypal, being Ideas *in mente Divina*"; (2) that this must be true also of space and duration; and (3) that it is difficult to conceive the *esse* of spirits as merely *percipere*. "Can actions be the *Esse* of any thing? . . . The Duration of the Eternal Mind, must certainly imply something besides an Eternal Succession of Ideas." That Berkeley did reply to these points is clear from Johnson's second letter, in which he apologetically but firmly adheres to his main positions; and the correspondence is closed for us by Berkeley's letter of March 24. The whole correspondence deserves study. Johnson hits on important points, though his arguments are at times very shaky; and Berkeley in one or two particulars makes his view more precise than in his books.

It is obvious that Johnson's mind had moved towards the positions of the 'Siris' whilst Berkeley was occupied with other affairs. Later, however, the influence of Malebranche, already present, increased in strength, and the argument from eternal truths plays a prominent part in his writings. It is interesting to notice that he definitely confines the word idea "to the immediate objects of sense and imagination," notion or conception "to the objects of consciousness and pure intellect". He agrees with Locke that we have not innate ideas prior to experience; "but experience once given, there are certain truths of intuition as certainly known as are those of sensation". We perceive them by "a kind of intellectual light within us," but "our minds are passive in this intellectual light as they are to sensible light". The last clause helps to explain why Johnson's work is now so little remembered.

Jonathan Edwards is a greater name, and it is unnecessary to summarise his views here. Two questions arise concerning them; one purely historical—How far was his early idealism an original product? the second a question of interpretation—How are the apparent divergencies in his doctrines to be reconciled? As to the former question, it is now clear that Edwards's approximations to Berkeley were not derived from Berkeley, and Prof. Riley is justified in his admiration of the precocity of his youthful essays. Their diction, however, is evidence of considerable philosophical reading; it is known that Edwards had read Cudworth, and it would perhaps have been worth while to consider rather more fully his relationship to the Cambridge school. With regard to the second point, Prof. Riley maintains that the common element "beneath the entire field of his speculations" must be found in his mysticism, "for his idealism appears to be based upon a mystic form of phenomenalism, his determinism upon a mystic doctrine of passivity, his pantheism upon a mystical absorption of the individual into the absolute". This statement may well be true in a general way, but it has to be supplemented by other considerations which Prof. Riley brings out subsequently. The difficulties in Edwards's writings arise from an unusual combination of qualities in his character. He was at once possessed by a love of beauty, a keen and uncompromising logician, a Calvinist, and a mystic who "felt God". The æsthetic-mystical feelings and transports were most powerful and at times seem wholly victorious, but on occasion his Calvinism suddenly swings in upon us again. There is, when all is said, a "duality between Edwards the theologian and Edwards the philosopher". One may doubt whether Prof. Riley has chosen the best terms to express this opposition, but anyhow it is

the divergency within the man that explains the discrepancies in his writings.

Of the other writers mentioned in this volume Cadwallader Colden and Benjamin Rush will perhaps repay attention more than the rest. Priestley comes in only incidentally. Franklin and Jefferson do not appear at their best in philosophy.

T. Loveday.

*Experimental Psychology. A Manual of Laboratory Practice.* By E. B. Titchener. Vol. II. "Quantitative Experiments." Part I. "Student's Manual." Part II. "Instructor's Manual." The Macmillan Co., 1905. Pp. xli, 208, and clxxi, 453.

This double volume completes Prof. Titchener's *Experimental Psychology*. As in the case of the volume on qualitative experiments, the instructor's manual contains more than twice as many pages as the student's part. The latter consists of minute directions for the conduct of experiments, the former of historical and critical amplifications and discussions of the methods and problems proposed in the other part. The two parts together deal exhaustively with the psycho-physical methods of measurement (in the stricter sense of the phrase) and with experiments on reaction-times. That is to say, they treat of the historically prior and actually fundamental modes of mental measurement. And they treat of them exhaustively and in detail with a thoroughness, a fullness of knowledge and of laboratory experience, and a soundness of judgment, that are beyond all praise. Every section contains ample information and advice about apparatus and very abundant references to the literature. The feature of most general interest is the introductory section of the instructor's manual which constitutes an admirable critical survey of the development of the methods and theories of mental measurement, and of the keen controversies which have played so great a part in this development. Here Prof. Titchener accepts in the main the views of the late Prof. Delbœuf, and appears as an ardent and able defender of the value and importance of the work of Fechner and those who have followed most closely in his footsteps; incidentally he rebuts with justifiable indignation Prof. James's strictures upon all this work. For some unguarded remarks in Prof. James's 'Principles' have unfortunately given a number of students, who are unaware that he was the first to conduct a course of experimental psychology in an American university, a vague impression that he attaches no importance to the experimental methods.

There can be no doubt that, wherever students are so fortunate as to have the opportunity of devoting a considerable amount of time to work in a well-equipped laboratory, these two volumes will be of the greatest service both to them and their teachers. And it must be obvious to any one who inspects these volumes that, for a sufficiently able student, the course of laboratory work prescribed in these two volumes is, as regards its educational volume, not inferior to any that is offered by the other experimental sciences. Indeed, it may well be maintained that it is much superior in this respect to all others; for the work demands a more continuous exercise of all the intellectual faculties, especially the faculty of exact observation, and keeps constantly before the mind a larger range of more subtle problems than any other kind of laboratory work that a student could undertake; and to this must be added the manipulation and control of an extensive and very varied range of delicate apparatus.

Seeing that experimental psychology has still to make its way against a great deal of prejudice, and that many persons will turn to these

volumes in order to get some general idea of its aims and methods, it is, perhaps, unfortunate that Prof. Titchener has not chosen to present his valuable material in a more readable and more generally interesting form. The division of each volume into the two parts, which results in the treatment of each topic being divided between the two parts, and the too abundant use of abbreviations, make the use of the book very difficult until one has become very familiar with it. But, apart from these difficulties of form, the attractiveness of the book might have been increased if more had been said to illustrate the way in which the various methods so carefully described may be, and have been, applied to the solution of problems of primary and general importance. If considerations of space forbade this, some general account of the main aim and outcome of experiment might surely have been given at the beginning or end of the book. From this point of view also it is a matter for regret that many of the most interesting and important fields of experimental work, and those having the most obvious and immediate bearing on the problems of life, have been either passed over without mention or referred to in a few lines only, *e.g.*, the work on memory, which is perhaps the most important of all the experimental work yet done; the work on fatigue, which, if it still is in the stage of dispute, has attracted perhaps more general interest than any other branch; the work on drugs; the attempts, like that of Binet, to discriminate types of intelligence; the investigations of Spearman and others into the correlations of faculties; experiments on the behaviour of children and animals. Again, to many it will seem a defect that so little reference to, or discussion of, physiological facts and hypotheses is introduced.

To all these complaints Prof. Titchener would no doubt reply by insisting that the book is strictly for laboratory use, and that it is to be supplemented by formal lectures and by conversation. But there is, I think, sufficient evidence in the volumes to support a charge that the author takes too narrow a view of the business of the experimentalist. Thus, the first sentence of vol. i. runs: "A psychological experiment consists of an introspection or a series of introspections made under standard conditions"; and the first sentence of vol. ii. tells us that "the object of the qualitative experiment in psychology is to *describe*; the object of the quantitative experiment is to measure". These definitions would rule out a very large part of the most valuable experimental work yet done, especially if we take the latter passage in the sense in which it seems to have been written, namely, that the things to be described and measured are facts of consciousness only. It is no doubt well to emphasise the fact that experimental psychology is not something to be opposed to introspective psychology. Nevertheless it is not well to ignore the fact that much of the experimental work that can be, and has been, done does not necessarily involve, or rely upon, introspection. It would be more satisfactory to say that psychological experiment consists in applying any device, any arrangement of time, place, things, and persons that the wit of man can devise, for throwing light upon the nature of mental processes. For Prof. Titchener's definitions rule out the very large field of objective experiments, all those in which we infer mental changes and capacities from behaviour, and all those by which we seek to gain evidence bearing upon the nervous or other processes and states of which consciousness and conduct are the inner and outer expressions or resultants respectively. Prof. Titchener, in fact, seems too nearly content to make the goal of all experiment merely a refined analytic description of consciousness. Whereas the essential work of psychology is the construction of a working system of hypotheses as to the structure and functions of mind (not of consciousness merely), as to the mental forces and the con-

ditions of their operation. And experiment is valid and valuable in so far as it contributes towards this result. Prof. Titchener speaks of the various 'psychologies' as pursuing their ways independently of one another, and would leave to the future the task of co-ordinating the results achieved by the different methods. Is this a sound position to take up? Is it not rather obvious that the psychologist should aim at obtaining a grasp of all the different methods and their results, and that he should, as far as possible, bring them all to bear upon any problem he takes up? If so, then to accentuate the separation of the laboratory method, which form only a part of the strictly experimental methods, and to make of them a relatively independent 'psychology,' is a mistaken policy.

W. McD.

*Suggestion in Education.* By M. W. Keatinge, M.A., Reader in Education in the University of Oxford. London: Adam & Charles Black. Pp. viii, 202.

This is an able, stimulating, and suggestive little book. It belongs to the few, the very few books written in English which appeal usefully both to the student of psychology and to the practical teacher. Its psychology is the psychology of psychologists and its education the education of educationists, for Mr. Keatinge evidently maintains his professional powers by constant practice, and gets his psychology, not merely from text-books, but from the work actually current among psychologists of to-day. Moreover, the author fully recognises that it will not be by the use of generalities alone that the educationist will be convinced that the psychologist and the teacher can become mutually helpful, but by the patient application in detail of the knowledge of the one to the problems of the other.

But no one who swears *in verba magistrorum* will like the book. Nor will any one who goes to it for a set of duly rounded doctrines or a system of education. Such persons will be, and deserve to be, disappointed. Yet the author definitely faces some of the great questions. How far can we teach at all? What difference can be made by educational environment, even at its best, to the native powers of the child? A first-rate expert, it is said, never believes in his own trade. Doubtless this is an exaggeration; yet it is now fairly patent that the wild hopes of the merely political educationists of the nineteenth century had no basis of reasonable belief so far as the possibility of general intellectual culture was concerned. Compare the expectations that were entertained from popular education with its actual results. Science, too, tends to limit our hopefulness. Mental and physical are one; you cannot, it is supposed to say, add to a man's natural stature, physically or mentally.

Mr. Keatinge thinks the 'suggestive idea' carries us over the difficulty, so far as mental life is concerned. Unexpectedly, for a writer who is consistently opposed to Herbart, he gives an Herbartian independence and potency to 'ideas'. He instances several men of genius who have stated that their whole careers were determined by insignificant but suggestive episodes in their youth. Ranke became a great historian because he was so shocked one day to find Scott's Lewis the Eleventh inconsistent with Commynes. Frederick Myers acquired from the sight of a dead mole his great horror of a death without resurrection. Rousseau hated the oppressors of the poor and advocated a return to Nature, because a peasant had said he had no food—an untrue statement, in order to escape taxation. But ought we to accept autobiography as psychology? To how many men have similar events happened without con-

verting them into geniuses! If a great natural tendency exists, the merest spark, so to speak, will set it aflame. But if not, what then?

The book opens with an account of hypnotic suggestion; then, passing through a short chapter on operations subsidiary to suggestion, the author deals with educational suggestion proper. The reader will find that, in this progress, he has passed from one meaning of suggestion to another differing from it *toto coelo*. The ordinary every-day use of the term seems to me more appropriate to the author's real doctrine than its use in hypnotism. One suggests to a person when one puts something forward that he may accept or reject, when one assumes no authority over him, when he is at perfect liberty to believe or disbelieve, to act or to refrain. Mr. Keatinge holds that much of the very best teaching is done by suggestion of this sort (I heartily agree), and he gives some of the conditions which make for success in it.

But what has hypnotic suggestion to do with this? Is it suggestion at all in any but a contorted and specialised sense of the word? Hypnotic *suggestions*? No, of all commandments the most hortatory, of all directions the most explicit, of all authorities the least compromising, of all methods the least prone to liberty. The author may mean that we ought, in practice, to make a gradual transition in teaching from the second meaning to the first, as our pupils advance in age and power. But he does not say so, and, to me at least, the two aspects of 'suggestion' face each other with hostile glance.

A minor point, but one of interest to psychologists—the author argues against Prof. Stout's use of the term "relative suggestion". His argument appears to me cogent and I propose the term 'proportional association'. Every teacher knows what this is and what it isn't; he tries to drag it into consciousness and build upon it when teaching his boys the 'Rule of Three'.

A point of excellence, because it is so rare, even in books by competent psychologists, is Mr. Keatinge's insistence on the constant correlation between the associative and dissociative processes. To know about things means, not only to be able to link them up with what they are like, but to be clear about what they are not like; and as the likenesses and unlikenesses, even with the same things, will vary for every different purpose of our thought, we have a problem which neither associationism nor dissociationism can solve by themselves.

The writer duly recognises that an explanation of mental life, based on the analogy of mere paths of habituation due to resemblances in things and repetitions of actions, is clearly inadequate.

My interest in the book emboldens me to offer a suggestion or two for the second edition which ought, certainly, to be called for. Firstly, a weaving up of the different meanings of the term 'suggestion,' with a clearer delimitation of the practical educational application of each sort of 'suggestion'. Secondly, a determination of the limits within which the 'suggestive' idea can operate. Thirdly, a restatement of much that is expressed in the language of associationist hedonism, which does not, I think, fairly represent the author's position.

Finally, with some hesitation I ask, not having the whole of the author's pedagogical doctrine before me, whether he does not lay too much stress on the prevention of the 'contrariant idea'. Many teachers would welcome any ideas which were aroused by their teaching, whether consilient or contrariant. And there is a practical as well as a logical sense in which 'contraries' are very relevant to each other. In fact, the whole of the evolution of knowledge in some systems of philosophy has been made dependent upon the mutual delimitation of opposing views held together until they synthesize.

W. H. Winch.

*Beyond Good and Evil. Prelude to a Philosophy of the Future.* By FRIEDRICH NIETZSCHE. Authorised Translation by HELEN ZIMMERN. Edinburgh and London: T. N. Foulis, 1907. Pp. xv, 268. Price 5s. net.

*Nietzsche in Outline and Aphorism.* By A. R. ORAGE. Edinburgh and London: 1907. Pp. 188. Price 2s. 6d. net.

*Thus Spake Zarathustra. A Book for All and None.* By FRIEDRICH NIETZSCHE. First Authorised Translation. Revised Edition. Second Part. Corstorphine, Edinburgh: Thomas Common, 1907. Pp. 61. Price 1s. net.

These books show that some people think it worth their while to keep alive any interest there may be in England regarding Nietzsche. The most important of them is the translation of *Jenseits von Gut und Böse*. Two things present great difficulty to the translator of Nietzsche; the *tempo* of his style, on which he laid so much stress, and the effort to secure the *mot juste*. In this translation, which is always readable but aims generally rather at transcription than translation, the effort to be literal leads to an almost total disappearance of the *tempo* of the author with its peculiar quality of *muthwillige Laune*, and whether literal or not, there is frequent failure to hit on just the right word. Of the truth of the first charge the whole book with its unwieldy paragraphs, from an English point of view, and its frequently slavish adherence to the original punctuation is a proof. Opening the book perfectly at random the other may be illustrated. "All psychology hitherto has run aground on moral prejudices and timidities, it has not dared to launch out into the depths" (p. 33), is a funny translation of "Die gesammte Psychologie ist bisher an moralischen Vorurtheilen und Befürchtungen hängen geblieben: sie hat sich nicht in die Tiefe gewagt". As it stands the English is absurd. In order to run aground one must, if the simile is nautical, have ventured off the mud of the harbour. But *hängen geblieben* is nothing like run aground, and the idea rather is that Psychology clings to the surface and will not relinquish the floating spars of prejudices, etc., to sink to the depths. Again, page 104, foot, "matter-of-fact" scarcely renders that difficult word "Thatbestand," and some expansion would have been necessary to bring out the meaning. On the opposite page we have "absurdly false" for "abgeschmackt-falsch," which I should have thought was "insipidly false," and "assents to morality" for "zur Moral Ja sagt," where I should have written "affirms". Again, on page 130, "mitgefühlt" is scarcely "experienced" but rather "reproduced from one's own experience," and I think "Vertrauensseligkeit" is rather "bland" than "blind" confidence. But there is really no use pointing out these minor defects. The work has been adequately done if the object is to give the English reader the matter if not the manner and the fine shades of Nietzsche. There is an Introduction to Miss Zimmern's translation by Mr. Thomas Common from which we learn that "the Neo-Hegelianites and Greenites" have formed "an alliance with Mammonism in its worst form"; also that the (living) leaders of English thought are A. R. Wallace, A. J. Balfour, Benjamin Kidd, Frederic Harrison and Andrew Lang, a list remarkable for exclusiveness. Mr. Schiller should also note that his "'Pragmatism,' about which there is so much noise at present, has obviously been largely influenced by Nietzsche's writings". This introduction is an unfortunate adjunct to Miss Zimmern's conscientious work. Many ideas put forward by Nietzsche may occur, as the editor says, in other writers, but surely

without deliberate, unacknowledged appropriation. Nietzsche has done little more than give expression to an exasperated state of feeling that is tolerably wide-spread, and hints of his would be quickly taken. In fact that wretched phrase, a suggestive writer, seems to be the only one to describe Nietzsche, or any merit his work possesses. His own system is a mere tissue of absurdities, but he is an acute critic of our institutional life, and has ideas that may be illuminating, sometimes one feels as if they were, but not quite in the way he meant. The extracts in the second volume noted above make rather a pitiful accompaniment to the little essays in exposition which are not at all bad. Aphorisms were Nietzsche's great weakness, and make him sometimes appear as if he were a glorified sort of Tupper. He was physically and mentally too weak for sustained thought or composition, and he characteristically turned his defect into an asserted merit, but it is astonishing that he should be taken at his word. Generally speaking, on re-reading *Jenseits* after some years, and on glancing at the other works, I feel how correctly Nietzsche foresaw that what at one time seemed to him the "sudden sparks and marvels of his solitude" would become – not "truths," as he was so much afraid—but indeed "so pathetically honest"—and "so tedious".

DAVID MORRISON.

*The Aim and Achievements of Scientific Method: an Epistemological Essay.* By T. PERCY NUNN, M.A., D.Sc., Vice-Principal of the London Day Training College, London. London: Macmillan & Co., 1907. Pp. x, 144.

This interesting essay was presented to the University of London as a thesis for the degree of Doctor of Science, and it certainly merited publication. The position which Dr. Nunn seeks to maintain with regard to science is shortly as follows. Science is an attempt to render the Objective intelligible, and differs from other similar attempts in being disinterested. Its aim is knowledge, not works. In explanation (or systematisation) the man of science is free to use any hypotheses that he may find serviceable, but he must discard them when they have served their purpose. Some hypotheses, indeed, are actually or conceivably) verifiable. Thus fragmentary data may be explained by hypothetical interpolation of "additional elements of the same order that would make the system complete," or of relations between the data, and such interpolations may have real validity. But the "typical" hypotheses of science, such as the atom, are not homogeneous with the data and are not conceivably verifiable. The common idea that these constructions can, not merely explain, but replace the data—that they are real, and the data appearance—is mistaken metaphysics; their fate is to disappear when they have done their unifying work.

All this is very clearly stated and illustrated in a most interesting manner from the history of science. The weak point of the essay does not lie in the discussion of the main theme, but in the first chapter, which Dr. Nunn devotes to the meaning of "the Objective". He writes as an avowed follower of Mr. Russell and Mr. Moore, but the chapter is too long for a mere confession of faith, and far too short to be in the least convincing to those who are sceptical of the value of the "new realism". Thus the ultimate mark of objectivity is found in a conviction of the "priority" of the data to our cognisance of them, but the concept of *data* is left almost unanalysed. Or again, inconsistent presentations are, it is said, all equally of the objective, and "a thing may not absurdly be said to have at the same place and the same time

many non-identical hotnesses" (p. 86); but, though Dr. Nunn sees that on this view it is difficult to account for, or even to admit the existence of, erroneous perception, he declines to meet the difficulty. His readers will regret that he has not expanded this part of his thesis, for his treatment of objections would evidently have been both fair and interesting, whilst, as it is, the earlier part of the book seems to lack tone.

Dr. Nunn concludes by differentiating his view of science from other views. With the ordinary belief of men of science that their hypothetical constructions have real validity he has dealt already. He objects, on the other hand, to descriptive and pragmatist views that they fail to make a necessary distinction between data marked by priority (with which may be ranked certain primary constructions such as that of "a thing") and secondary constructions of the openly inferential, scientific type, and though science has an economical value and an obvious bearing on action, yet its characteristic purpose is to render the given intelligible, and its characteristic achievement—for it achieves more than it at first aims at—is to discover new facts—determinations of the objective that were previously unknown.

T. L.

*Hygiene of Nerves and Mind in Health and Disease.* By AUGUST FOREL, M.D. Translated from the German, by AUSTIN AIKINS, Ph.D. London: John Murray, Albemarle Street, 1907. Pp. x, 343. Price 6s. net.

The general stock of ideas in this book is the same as in Dr. Forel's *Hypnotism*, noticed in MIND, N.S., No. 64. It is, therefore, unnecessary again to give a summary. But this volume is written mainly for lay readers. It is really a work on hygiene, as distinguished from medicine. Part I. includes mind, brain and nerves in their normal condition. Part II. deals with the pathology of the nervous life, but strictly from the standpoint of practical life, not merely from the medical standpoint. Part III. takes up the positive hygienic remedies available, including general hygiene of environment and occupation, pedagogics and special hygiene of the various ages and their related crises. The whole book is well composed, and all that it contains has the note of extended experience. But the most stimulating chapter of Part I. is chapter v., on embryology and race history. "The brain is the man, say we" (p. 117). "A healthy training of the brain must be as many-sided as possible. Above all, the motor side, the appropriate exercise of the muscles—not mere muscular exercises, but muscular effort directed to reasonable voluntary ends—should go hand in hand with the training of the senses and the memory" (p. 119). "We must carefully combat all premature abstractions" (p. 120). "A teacher once told me it was a good thing that school children were so inattentive; for otherwise they would be ruined by over-exertion" (*ib.*). "The law of practice holds to old age, to the very grave" (p. 121). "The lazy man who works as little as possible usually gets old mentally faster then the man who works" (p. 122). Dr. Forel offers an ingenious theory to reconcile the possible inheritance of acquired characters with the relatively isolated germ-plasm of Weismann. He uses the 'engram' theory of Semon, previously summarised. I do not follow clearly his effort to bridge the gap. He seems to me to leave Weismann just where he is. In the pathological part there is an admirable summary of leading facts. Dr. Forel lays enormous stress on alcohol as cause of mental deficiency (p. 210). Another great cause is 'emotional wounds' (p. 210), such as may result from assaults on children. We are familiar with this class of fact from the writings of

Dr. Pierre Janet. In Part III. there is an excellent chapter on the reformed pedagogy of the German and Swiss Country Training Homes. These have as yet reached the stage of experiment and no further, taking as their model Abbotsholme in England. Open air and the real labour side of the educational day are highly developed as factors in the training (pp. 300 *et seq.*). The book entirely fulfils its purpose, namely, to put the great generalities of medical experience into a form available for application to the hygienic conduct of the individual life. The translation is good English, and the print more than fulfils every requirement of a hygienic book.

W. Leslie Mackenzie.

*What is Religion?* By Wilhelm Bousset, Professor in the University of Göttingen. Translated by F. B. Low. London: T. Fisher Unwin, 1907. Pp. xvi, 304.

Bousset's *Das Wesen der Religion*, originally delivered as a course of public lectures, has already gone through two or three editions. It has all the merits of a compact and luminous survey, where due emphasis is laid on the salient facts. Occasionally one may question the author's judgment, as when he treats Plato's philosophy as a Religion of Redemption; and he exaggerates a little when he sharply contrasts a primitive Christian consciousness with the creeds of the early Church, and regards the latter as spurious accretions which have overlaid the former. But viewed as a History of Religion the volume is both suggestive and valuable. As a contribution to a theory of religious development it is less successful; for Bousset does not make clear the relation of the various existence-forms of religion to its nature, nor the inner connexion of the different phases.

Of the present translation we cannot speak well. For the most part it is not faithful enough to the original, and serious blunders are by no means infrequent. It is only fair to offer some proof of this. Bousset, speaking of the egoistic attitude in religion, adds, 'in which case there would fall to the Deity the part of being *serviceable*'—*wobei der Gottheit die dienende Rolle zukäme*. This is rendered (p. 22 "by which means his subordinate position is brought closer to the Godhead". A few lines further down *Sichhingebenfühlen* is quite inadequately translated 'self-surrender'. On page 71 *Göttergestalten*, 'forms of the gods,' appears as 'idols,' where there is no reference whatever to material images. On page 76 *Naturbestimmtheit* is grotesquely rendered 'original destiny,' with misleading results. *Jahrtausend* appears as 'Century' pp. 90-91, 213). We read (p. 108), "Religion and property become the same thing in the national life". Turning to the German for light on this dark saying, we find, *Religion und die Güter des nationalen Lebens liegen ganz in eins*. On page 213, "The heritage of the Greeks took the place of the world-empire of the Romans". Reference to the original shows this should read: "The Roman world-empire enters into the heritage of the Greeks," as the context might have indicated. "To the coherence in natural science itself due to the action of natural law" (p. 283). One wonders how on earth the translator got this out of *der gesetzmässigen Zusammenhänge selbst in der Geschichtswissenschaft!* Finally, on page 262 we read: "Luther, when he destroyed the externals, also destroyed the Sacrament in its peculiar significance, and with it sacramental religion". One would think poorly of Bousset's historical knowledge if he had so expressed himself. What he wrote was, *Mit allen jenen Aussendingen hat Luther auch das Sacrament in seinem eigentlichen Sinne, und die auf dieses Sacrament gerichtete Frömmigkeit, im Princip aufgehoben*. Similar instances

could easily be multiplied, but enough has been said to show that a translation like this is calculated to mislead those who rely on it.

GEORGE GALLOWAY.

*Psychology; An Introductory Study of the Structure and Function of Human Consciousness.* By JAMES ROWLAND ANGELL. Second Edition, Revised. Constable & Co., 1905. Pp. 402. Price 7s. 6d. net.

The second edition of Prof. Angell's text-book does not differ substantially from the first one. It is a very serviceable general text-book, clearly written, judiciously arranged and of moderate length. Although the author is content to define psychology as the science of consciousness, he advocates a 'functional' rather than a 'structural' treatment of psychology, he adopts "the biological point of view just now dominant in psychology and regards consciousness, not as a metaphysical entity to be investigated apart from other things, but rather as one among many manifestations of organic life, to be understood properly only when regarded in connection with life phenomena," and he "lays it down that the real human organism is a psycho-physical organism". Accordingly a fair share of attention is given to the consideration of nervous structure and functions, to attention, instinct, impulse, emotion, desire, and volition, and their bodily expressions. But the functional programme is not carried out as thoroughly as might be wished; and this is the inevitable result of the fact that the author has not made full use of the conception of the psycho-physical disposition. The author accepts unreservedly the view that all mental retention and reproduction is conditioned by the persistence of neural changes; but in the application of the view he hardly gets beyond such statements as that 'the cortical activity . . . is in large measure determined by the modifications which previous experiences have impressed upon the structure of the hemispheres'. A thoroughgoing functional psychology, however, can only be built up by the development of the conception of complex psycho-physical dispositions that grow, are differentiated and circumscribed, and enter into complex systematic relations with one another.

The author puts forward a peculiar view as to the conditions of the rise of emotion. After giving a satisfactory account of emotion, he lays it down 'that emotions appear whenever there is conflict among the motor impulses called forth by any special situation,' and he makes of such conflict an essential condition of emotion. This seems a quite gratuitous assumption, and one incompatible with the author's own statements as to the relation of emotion to instinct.

In spite of these drawbacks the book seems to be one of the best, perhaps the best, for the introduction of the student to the study of psychology, since, though its teaching is clear and definite, these qualities are not driven to the point of baldness and a misleading simplification of the complexities of mental process.

W. McD.

*A Short History of Philosophy.* By A. B. D. ALEXANDER. Glasgow: Maclehose & Sons, 1907. Pp. 601. Price 8s. 6d. net.

This book is designed for the use of the university and general student of philosophy, and provides a readable and in the main a trustworthy account of the course of European thought. While not comparable to the standard histories either as a book of reference or as a piece of interpretation and criticism, it is suitable for the beginner or the general

reader to whom the larger works might be both too voluminous and too expensive. Yet this is rather more than a mere compendium of information obtainable from larger histories; for the author has made acquaintance at first hand with the works of some at least of the master thinkers, and he has a grip of the philosophic development which enables him to show how one system or tendency is related to another either in the way of completion or of correction. When one comes to examine in detail the exposition and interpretation of any of the great systems, one finds that the book would be quite inadequate as a help to the special study of this or that philosopher save as indicating the context (so to say) of his work; both the expositions and the criticisms are very often too summary, and at their fullest are not always illuminating. But as a concise and connected treatment of the whole development, it is commendable. The style is clear and the subject-matter is well apportioned and brought well down to date. The Introduction (on the nature of philosophy and its history) and the Conclusion (chiefly on the same topic) are slight—rather meagre even for an elementary treatise, but they are not inept.

The paucity of such works in English, save as translations, goes far in itself to make this effort welcome. And although the desiderated English history of philosophy, *when it appears*, will have to be something greater than this, the present volume has some value and a character of its own as a contribution in that direction. As regards its detailed contents one may notice that the treatment of the ancient philosophers is less complete and satisfactory than that of the modern; that more attention than usual is given to English and Scottish philosophers; and that the accounts of the doctrines of Kant and of Hegel are specially full and clear. Due note is taken of ethical and social as well as metaphysical theories, and something is even done towards showing the connexion between the philosophic development and more specifically scientific work on the one side and mystic, poetic, or romantic teaching on the other. The volume contains a short bibliography and is supplied with a good index.

T. M. Forsyth.

*The Practice of Instruction.* Edited by John William Adamson, B.A., Professor of Education, King's College, London. London: National Society's Depository. Pp. 512.

This new manual of method—general and special—will be welcomed particularly by the not inconsiderable class of educationists who desire that religious instruction should find a place in the school curriculum, and in the teacher's course of preparation.

It consists of two parts—the one dealing with general method, the other with the applications of method to the teaching of the leading schoo subjects.

The former, which professedly discusses General Method, is really an introduction on broad lines by Prof. Adamson. It can hardly be called a full or systematic treatment of educational method, but it will serve a good purpose. That purpose is to emphasise the importance of system, as one of the chief ends of all instruction. It is not usually made sufficiently clear in such manuals that the growth of mind, and therefore the trend of instruction, which is, or ought to be, the guidance of mental growth, is towards relatedness, unity, in a word system. Prof. Adamson's treatment of the development of knowledge, and of the sequence and forms of instruction is worthy of commendation because throughout he makes this progress towards system distinct and prominent.

He brings out well the distinction between logical and psychological sequence. This distinction suggests the solution of many of the problems of practical method and of the curriculum. These problems usually "spring on the one side from the nature of knowledge, and on the other from that of the childish intelligence". Errors in the practice of teaching have often arisen from an attempt to proceed too strictly upon the lines of logical sequence,—an attempt which shows a failure to appreciate the real order of mental growth.

The sections dealing with the Curriculum will prove fresh and suggestive to the student, for they discuss the established curriculum of English schools in the light of the curricula of other countries, and of the leading results of experimental pedagogy.

The eight articles upon special method which form the second and larger part of the volume are by experts in the various subjects. They do not enter into too much detail, and they are calculated to give wise practical guidance to the young teacher.

JOHN EDGAR.

*Outlines of Indian Philosophy. With an Appendix on the Philosophy of the Vedânta in its Relations to Occidental Metaphysics.* By Dr. PAUL DEUSSEN. Berlin: Karl Curtius, 1907. Pp. vi, 70.

*A Short History of Indian Literature.* By E. HORRWITZ. With an Introduction by Prof. T. W. RHYS DAVIDS. London: T. Fisher Unwin, 1907. Pp. xxxi, 188. Price 2s. 6d. net.

The literature of India is of unique interest to the student of Religion and Philosophy. In it we find these two inseparable, and philosophy no mere academic pursuit but a living force penetrating a people. No one is better qualified to tell us about these things than Prof. Deussen, who has given a life to the understanding of them, and who combines loving devotion to his subject with sound and exact scholarship. To me it appears that while he has necessarily improved as an exponent of Indian philosophy, he has not really progressed in his appreciation of European. There is something almost pathetic in his reliance on Schopenhauer, on his interpretation of Kant, on his conclusion that Greek, German and Indian Metaphysics are agreed in regarding the world as a mere delusion; that as "extended in space and running on in time it is merely a representation of my mind and nothing beyond it"; and that to seek for a cause of our apparently real individuality, which is just ignorance of our true nature, is to apply causality where it has no meaning. There is something great and sublime and true in the conclusion of Indian Philosophy that my own Self, my *Âtman*, is the core of reality because identical with the *Paramâtman*. It at least preserves the reality of the Self. But it does that at the cost of a desolating and paralysing conviction of the unreality of the experiences of the Self that does not seem warranted.

The work by Mr. Horrwitz is intended for the average general reader. It is interestingly written, and fulfils its purpose of making him acquainted with the intellectual achievements of the Hindus.

DAVID MORRISON.

*The Philosophy of Goethe's "Faust".* By THOMAS DAVIDSON. Edited by CHARLES M. BAKEWELL. Boston, London, etc.: Ginn & Company, 1906. Pp. iv, 158. Price 3s. net.

In these lectures, now posthumously published, Mr. Davidson gives a clear epitome of the two parts of the poem, together with a running

commentary which is on the whole sound, always interesting and sometimes fresh and valuable. He tells us that the content of the poem is the history, scope and consequences of the entire spiritual movement towards individual emancipation begotten of the Reformation and the Renaissance. By no means blind to the great imperfections of the poem as a work of art, he also considers its teaching to be spoiled by the fact that the presence of eternal reality was not an always living thought to Goethe, who did not recognise that each of us is universal and eternal as individuals in each of whom "the universe is organised". The book is good of its kind. Mr. Davidson's philosophical exegesis may read a little old-fashionedly, and it is unlikely that there was just such an abstract groundwork to Goethe's drama as he seeks to lay bare; but he speaks with no little authority and great conviction, and does succeed in giving a sort of unity to the action of the drama. Goethe's complicated allegorising had probably a more purely temporal reference than Mr. Davidson recognises, but one is glad to hear what he has to say.

D. M.

*The Case of Existence.* By NORMAN ALLISTON. London: Kegan Paul, Trench, Trübner & Co., 1907. Pp. 262.

Under this enigmatical title Mr. Alliston offers us a philosophy of life. He divides his work into three parts which he terms respectively, "The Criteria of the Case," "The Review of the Case," and "The Ethics of the Case". In a vague way these divisions might correspond to what a competent thinker would call Epistemology, Metaphysics, and Ethics. Mr. Alliston, though he does not lack confidence, has evidently a very slight knowledge of the History of Philosophy and its problems, and his book contains a great deal of crude and confused thinking. His main idea seems to be that things and persons have a nature of their own which is simple, original and incapable of further explanation; and to express their nature is their end. In human beings the will is fundamental, and to act according to our will is our only criterion of good. But it is difficult to give a clear account of a book which is full of ill-digested and incoherent reflexions. The force of truth, we are told in one place, lies in the absence of will: elsewhere man's true end is said to be a satisfied will. Knowledge is boldly identified with perception, and we are gravely informed that the 'accepted standard' of reality is sensible impression. The writer passes easily from the true, if obvious, to the absurd. For instance, on page 26, we are warned that it is foolish to disparage human knowledge, and then a few lines lower down we read: "While belief, then, is the very image of judgment, and seems to affirm about matters just as decidedly, it yet lacks the one thing that can give true assurance, namely, direct perception. At bottom, consequently, the believer is a sceptic, or one who suspends his judgment." Some of Mr. Alliston's *obiter dicta* on religion and ethics, if not wise, are rather amusing.

G. G.

*Principles of Empirical or Inductive Logic.* By J. VENN. Second Edition. Macmillan & Co., 1907. Pp. 604.

The first edition of this important and valuable work having been exhausted, it has, happily, been succeeded by a second. The previous edition is dated 1889,[1] so that close on twenty years have elapsed since it was

[1] Critical Notice appeared in MIND of the same year.

penned. During that time some marked changes have occurred in the 'universe' of Logic; one of them is referred to by Dr. Venn in his preface—(he is speaking of the mode of arrangement adopted in his book)—namely, the fact that Mill's Logic no longer holds the dominating place it then had, and is nowadays far too often known only at second hand. The reissue of Dr. Venn's careful and practical treatise is all the more welcome as tending to prevent this side of logical doctrine from suffering undue neglect.

The present volume is substantially the self-same book as its predecessor, the changes that occur being all in points of detail or of statement and not of principle, and there does not seem to be any of them that call for particular notice. They are just such slight amendments, whether by way of addition or correction, as have by one means or another been suggested since the publication of the previous edition, and they testify by their number and minuteness to the author's care to make his book as complete and useful as possible. The result is a volume which neither the logician nor the scientist can well afford to be without.

T. M. F.

*Werke, Auswahl in Drei Bänden.* By F. W. J. von SCHELLING. Leipzig: Fritz Eckhardt Verlag, 1907. Pp. clxii, 860; 682; 935. Mk. 25.

The publishing firm of Fritz Eckhardt has had the excellent idea of bringing out the select works of the classic German philosophers in a uniform series and at a moderate price. It is believed that the revived interest in metaphysical studies, so characteristic of contemporary Germany, has created a want which the present project will meet. Twenty years ago such an enterprise would have been foredoomed to failure, but we are assured on good authority that times have changed since then. Schelling has been chosen to open the series chiefly, as would seem, because of all Germany's classic thinkers he is the most neglected and discredited. One can get all Kant, all Schopenhauer, and much of Fichte cheap in the *Reclam*, while Hegel's *Encyclopädie* at least is to be had for a moderate price in J. H. v. Kirchmann's collection of philosophers. But outside the collected edition of his writings in fourteen volumes nothing of Schelling's, great or small, has, I believe, ever been reprinted.

As will be seen from the figures given above, the present selection runs to a considerable number of pages, demanding some enthusiasm to read through. But it must be borne in mind that out of the ten volumes of the standard edition containing such of Schelling's works as were published during his life-time, only what would fill three and a half volumes of the same size has been reprinted, and of the four volumes containing his posthumous works, only half a volume; while within this comparatively limited range will be found all — and more than all — that entitles Schelling to count as a force in the evolution of thought. As regards the external get-up I have to observe that while the print is clear and good the volumes are most uncomfortably fat, and much less convenient to hold in the hand than those of the standard edition. If I remember rightly, De Quincey read Schelling at the rate of 360 pages a day; but whether he could have kept up that pace under such a serious handicap is more than doubtful. Nothing can ever make Hegel light reading; but let us hope that when he too comes to be reprinted the labour of holding up a thousand-page volume will not be added to his other difficulties.

Prof. Arthur Drews contributes to the present edition a short introduction of a somewhat apologetic character. He explains the

neglect and discredit into which Schelling has fallen by two causes. His *Philosophy of Nature* with its daring constructions based on highly speculative principles has been condemned without examination by those whose investigations were conducted according to the severest methods of induction. And the Neo-Kantian school cannot forgive one whose whole effort seems to have been directed towards rehabilitating the absolutism which in their opinion Kant's criticism has once for all shown to be a delusion. Anything coming from so high an authority on the history of thought as Prof. Drews deserves a respectful hearing. And no doubt the two schools he mentions, the scientific school and the neo-critical school, have contributed their share to the ruin of Schelling's reputation. But is it not a fact that they were only sealing down the tombstone on what was already dead and buried? To begin with, Schelling practically wrote himself down in that long series of new departures that have expanded his collected writings to such an intolerable bulk. Then came the murderous Hegelian attack, inaugurated by Hegel's own barbed epigrams in the preface to the *Phänomenologie*, and continued after his death by the Young Hegelians, among whom Heine may in this connexion be reckoned. His description of Schelling as "a mediatised philosopher," will not easily be forgotten, nor the delightful contrast between "the philosopher who spoke like a cobbler." and "Jacob Böhme, the cobbler who spoke like a philosopher". Our own Dr. Stirling continues the Hegelian tradition, though wielding a bludgeon rather than a rapier, when he pronounces "reading unnecessary in the case of what was life-long inconsistency, stained too by the malice, and infected by the ineptitude, of the end".

Whether as an effect of this malicious jealousy towards Hegel or from a general tendency to go with the tide, Schelling did his philosophy the further and irreparable injury of associating it with two reactionary movements, first with the Romanticism of the early nineteenth century, and then with the mystical pietism of the Restoration. His youthful studies, the *Transcendental Idealism* and the *Philosophy of Nature*, arbitrary and fantastic as they are, still contain a progressive element, they are in sympathy with the new science, they give a victorious expression to the revolt from the subjectivity and moralism of the previous century. To carry the work through, however, other qualities than facility and versatility were needed. Hegel possessed those other qualities and used them effectively — much to the disgust of his former ally. Prof. Drews thinks that Hegel cannot be rightly understood without a preliminary study of the works contained in the present publication, and that Kuno Fischer's luminous exposition has failed to revive German interest in Hegel owing to the prevailing neglect of his predecessor. Yet our English Hegelian school has somehow managed to dispense with it.

Besides the introduction by Drews this edition is accompanied by a life of Schelling and a summary of his philosophical writings from the pen of Otto Weiss, who is also responsible for the selection here offered. Weiss has devoted much labour and enthusiasm to the task, without however removing the impression left in my own mind by previous studies that his hero was personally a time-server, a bully, a braggart, and a coward, with less dignity of character than belongs to any other German thinker, besides being little better than a wonderfully clever charlatan in speculation. At the same time, like some other charlatans, he has got to be read by professional historians of philosophy, and to their comfort, for a German of the Romantic period, he writes rather well.

A. W. Benn.

*La Vita e il Pensiero di Roberto Ardigò.* Da GIOVANNI MARCHESINI. Milano, 1907. Pp. xii, 388.

Roberto Ardigò, the leading representative of Italian Positivism, was born near Cremona in 1828. He received a religious education, studied theology at the seminary of Mantua, and was ordained a priest at twenty-three. A lecture delivered in 1869 at Mantua, where he held a canonry, showed him to be what is now called a Modernist, and awakened the suspicions of his ecclesiastical superiors. Next year he categorically repudiated the dogma of Papal infallibility, a step which led to the severance of his connexion with the Roman Church. After teaching for ten years in the Lyceum of Mantua he became Professor of Philosophy in the University of Padua. Like Herbert Spencer he has a genius for mechanical inventions and is the author of a scheme for the sanitation of Mantua.

Prof. Marchesini analyses his master's philosophy with the intimacy and enthusiasm of a devoted adherent. But to give a luminous summary of nine large volumes in about 150 pages is a task beyond his powers. The concluding sections of the volume, fixing Ardigò's historical position, will be read with more interest. An attempt is made there to exhibit his independence of Comte and Spencer. Certainly the Paduan professor will have nothing to do with a religion of Humanity nor with a religion of the Unknowable. And it is claimed that his theory of reality in the widest sense derives by direct filiation from the Italian philosophers of the Renaissance, not without some reference to their predecessors the great Schoolmen of the Middle Ages. Going further back on the same path one might trace a clear connexion, direct or indirect, with the metaphysics of Aristotle, the great quarry whence the Renaissance thinkers dug. More particularly Ardigò's most characteristic principle, the idea of an indistinct substance developing itself by successive differentiations into space and time, object and subject, and finally into the most concrete shapes of objective and subjective experience, savours strongly of Aristotle's *prima materia*.

But discounting biographical and patriotic interests it does not look as if Italian Positivism had added anything essential to what it has imported from France and England. The three general principles enumerated by the author as characteristic of his master's philosophy: (1) that certainty is only given by experience of facts; (2) that sensations constitute the essential element of thought, and that they are relative; (3) that reality is homogeneous (monistica), determined, and evolved (p. 353)—do not seem to differ from Spencer beyond what is implied in the rejection of his dogmatic agnosticism. And no doubt the Positivism of the future will have to cultivate a certain negativism in retrenching such theological and metaphysical survivals as Comte and Spencer have, each in his own way, retained.

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# VIII.—PHILOSOPHICAL PERIODICALS.

PHILOSOPHICAL REVIEW. Vol. xvi., No. 4. **A. Lalande.** 'Philosophy in France, 1906.' [Discusses (1) the centring of philosophical activity in logic and science; (2) the changes recently introduced in the preparation for the philosophical career; (3) progress in the history of philosophy along the lines laid down by Boutroux and Brochard; and (4) the controversy between Mathieu and Lefranc concerning Pascal's part in the experiment of the Puy de Dôme.] **W. B. Pillsbury.** 'The Ego and Empirical Psychology.' [The three advantages claimed for the assertion of the presence of a self above or beside its content are illusory. We can no more conceive a knower knowing the elements of knowledge than we can conceive the mental states knowing themselves; besides, some element must know itself, unless we are to have an infinite regress or an unknown term. The unity of mental states is no more conceivable with an absolute unitary substance in or beside them than would be the unity of the states themselves, uncontained or unaccompanied. And the persistence of the substance always identical with itself does not immediately account for the fact that all experiences seem to belong together, to be all my experiences. Nevertheless, the need for the unity and identity of mental states is a real need, and the problem of how mental states are known is a real problem. We have unity in mind because all experiences, past and present, interact in the control and constitution of every apparently discrete act; in some degree or other all experiences, no matter how far separated in time, combine into a single element in each moment's experience. This unity and identity is dynamic, not static; it is also not merely constructive, but (as we learn from pathology, from the study of the subconscious, and from normal psychology) actual. The self is thus simply all that we are and know, organised, self-unified and self-identical; a growing vital unity that as a whole is effective in every experience. As for the problem of the knowing of mental states, it is the same as that of knowing things. The process of knowing, in both cases, is the process of making a reference to other elements previously organised into a type. For neither do we need a knower; knowing is just the combining of old mental states with new: if there be a knower, it is experience as a whole.] **G. S. Fullerton.** 'The Right to Believe at One's Own Risk.' [The right to believe is, evidently, a moral, not a logical or legal right. Hence it is better to discard the words "at our own risk," and, recognising the moral responsibility to ourselves and to the community under which we all stand, to discuss the right to believe with a full consciousness of such responsibility. The right may be granted, in the sense that the development of the life of man demands that he be allowed to go beyond objective evidence in accepting ideals and systems of practice. But then the right is limited, and its limits must be determined by a consideration of what is wholesome and helpful to the life of man. This rules out, first, a number of choices; arbitrary choices; choices dictated

by vanity, craving for originality, the pose of piety, etc. It suggests, secondly, that the views which it is desirable for a man to accept and to use in the regulation of his life are, ordinarily, those to which he has been born. The example of Descartes shows that this precept need not spell philistinism. The philosopher, in particular, should strive to avoid the detachment from all that is human that rejects every ideal not completely supported by objective evidence, and at the same time to avoid the blindness that assumes the objective truth of whatever may be the goal of his desire.] Discussion. **J. Dewey.** 'Pure Experience and Reality: a Disclaimer.' **E. B. McGilvary.** 'Pure Experience and Reality: a Reassertion.' [Discussion of McGilvary's critical paper in vol. xvi., No. 3.] Reviews of Books. Notices of New Books. Summaries of Articles. Notes. Vol. xvi., No. 5. **J. Watson.** 'Plato and Protagoras.' [The clear opposition in the *Protagoras* of the two antagonistic views, represented by Protagoras and Socrates respectively, is a proof that Plato entered sympathetically into each, while satisfied with neither. In the *Theætetus*, it is Plato's object to show that the view of Protagoras, which practically amounts to saying that there is no criterion of truth but the individual's conviction, or belief, or inability to think otherwise, is untenable. He limits this view, first of all, to judgments of perception, and is thus able to connect it with Theætetus' assertion that knowledge is sensible perception. He then goes on to connect it with the Heraclitean doctrine that all things are in flux. The doctrine thus elaborated, and referred by Plato to the followers of Protagoras, is substantially the same as modern pragmatism. To clear the ground for a fresh attack upon the whole principle, Plato restates the simpler doctrine of Protagoras himself, removing the restriction under which he has so far been considering it; what is now affirmed is that all judgments, and not merely those of perception, are true for each man. Plato's main objections are that the theory contradicts itself, and that it does not account even for the existence of particular judgments. These objections apply with equal force to the most recent forms of relativism.] **E. B. Talbot.** 'The Philosophy of Fichte in Its Relation to Pragmatism.' [(1) An important difference in theory of knowledge lies in Fichte's recognition of constraint as an element in knowing. Pragmatism fails to make a place for this aspect of the knowing process in its explanation of experience; Fichte seeks to explain the determinateness of experience in terms of the realisation of the Idea of the Ego. (2) The doctrine that all judgment is purposive thought is common to Fichte and the pragmatists; indeed, it is practically a commonplace of philosophy. Fichte, however, does not conceive, as pragmatism inclines to do, that thinking exists for the sake of practical ends in the narrow sense. (3) By the primacy of the practical reason Fichte does not mean that our moral nature can establish for us theoretical propositions that the intellect is unable to establish; he means only that certain propositions which we are wont to call theoretical are not theoretical after all.] **G. S. Fullerton.** 'In What Sense Two Persons Perceive the Same Thing.' [(1) To explain the fact that one person may perceive the same thing at two times or in two ways we must posit an objective order of experience, clearly distinct from the order of sensations and ideas. Any one of a whole series of experiences, existing at different times, may then represent the one thing. (2) To explain the like fact that two persons may perceive the same thing, we must accept the doctrine of ejects; we recognise more than one subjective order, and relate each of them to the objective. (3) There is but one objective order; for it is possible, by using this order as a bridge, to pass from the experience of one mind to the experience of another. A true and complete description

of the world in terms of my experience is a true and complete description of the world.] **W. Turner**. 'Mnemonic Verses in a Ninth Century Manuscript: a Contribution to the History of Logic.' [Text, with notes, of lines which contain in mnemonic form an enumeration of the syllogistic moods valid in each of the three figures, and which have been wrongly described as treating of the categories. The author is probably some one of the pupils of Iso and Moengal.] Reviews of Books. Notices of New Books. Summaries of Articles. Notes.

Psychological Review. Vol. xiv., No. 4. **J. R. Angell**. 'Studies from the Psychological Laboratory of the University of Chicago.' **W. V. D. Bingham**. 'The Rôle of the Tympanic Mechanism in Audition.' [Loss of the tympanic membranes and of most of the chain of ossicles in both ears may coexist with efficient auditory acuity, and does not prevent the generation of subjective difference-tones. The case suggests that the function of the tympanic mechanism is rather protective or physiological than conducting or physical.] **F. M. Urban**. 'On the Method of Just Perceptible Differences.' [Treatment of the method by the law of probabilities, with illustrations from experiments on lifted weights. The theoretical basis of the method is the same as that of the error method; its data can be worked out by the algorithm of the method of right and wrong cases; its result is that amount of difference for which there exists the probability one-half that it will be recognised.] **S. S. Colvin**. 'The Ultimate Value of Experience.' [Ultimate experience, which as subject cannot be known, is symbolised in every experience by a group of objects which seem to have value and finality in themselves. On the basis of this immanent experience have arisen utilitarianism and pragmatism; both systems have, however, come to ignore their origin, disregarding the ultimate worth of that part of our experience which is relatively subjective and does not ordinarily enter into the flux of a constantly changing world. On the other hand, intuitive ethics and absolute logic are able to consider the impulses and feelings that constitute this part of experience; they are also held to function for a pure experience. Here is the psychological basis for a philosophy of permanent values and transcendent significance.] **J. M. Baldwin**. 'On Truth.' [The author takes memory and thought as typical and analogous cases of mediate control. He finds it easy to show, against pragmatism, that memory is not correct or accurate because we can act on it, but rather that we can act on it (instead of on its original) because it is correct; we can establish correctness without implicating the motive to the specific sort of action. Before going on to deal with truth, he distinguishes the theory of knowledge through control (the point of view of his *Thought and Things*) from that of control through knowledge, the position of Dewey and his school. Noting, then, in the case of truth, the progress in the kind of mediation which would banish the external control factor, he traces, first, the twofold movement by which the control of reflection as mode of inner experience is constituted—the development of validity pure and simple, and the persistent return of the control of fact through the demands of action in concrete life; and, secondly, the movement whereby the individual judgment becomes synnomic. The self of judgment proves to be that of common function; truth is not a matter of individual interpretation, whether in terms of action or of cognition. In fine, the characters of truth are those attaching to the content of judgment as being under mediate control, and the meaning of truth is to mediate the original sphere of existence-meaning in which it arose.] Discussion. **E. H. Rowland**. 'A Further Application of a Result Obtained in Experi-

mental Æsthetics.' [In work with repeated units of design, it is found that observers fall into two types, rhythmic and static. It is suggested that these two apperceiving attitudes characterise the Western and the Eastern nations respectively.] **A. W. Moore.** 'Experience, Habit and Attention.' **J. M. Baldwin.** 'Comment on Professor Moore's Paper.' [Discussion arising out of Moore's review of *Thought and Things*, i.]

THE AMERICAN JOURNAL OF PSYCHOLOGY. Vol. xviii., No. 3. **A. A. Cleveland.** 'The Psychology of Chess and of Learning to Play It.' [Chess appeals to the fundamental fighting impulse, and to the æsthetic and puzzle-solving interests; it also affords the pleasure of being a cause. Visual imagination is an important element in playing, but may be replaced by motor, verbal or auditory imagery. Skill at chess is not a valid index of high mental endowment. The learning of chess shows a progressive organisation of knowledge, making possible the direction of attention to the relations of increasingly larger and more complex units.] **L. R. Geissler.** 'Fluctuations of Attention to Cutaneous Stimuli.' [Repetition and Variation of Wiersma's experiments with weights, and Ferree's with electrical stimulus. Attention focussed upon liminal and supraliminal cutaneous sensations may remain approximately constant for at least 2 to 3 min., if adaptation of the organ and intruding distractions can be ruled out. There is no evidence of fluctuation: normally the sensation fades out steadily and gradually with the course of adaptation.] **G. M. Whipple.** 'A Quick Method for Determining the Index of Correlation.' [Formula and table.] **E. M. Bolger** and **E. B. Titchener.** 'Some Experiments on the Associative Power of Smells.' [Odours, saturating pictures, were no more effective for recall than nonsense syllables (auditory stimulus), and were distinctly less effective than simple geometrical figures drawn in a corner of the pictures.] **J. E. Coover** and **F. Angell.** 'General Practice Effect of Special Exercise.' [(1) The training of discrimination by auditory stimuli is transferred to the discrimination of brightness stimuli; the factors are largely due to habituation and to economic adaptation of attention, that is, are of a general character. (2) Training the activity of reaction with discrimination and choice by sorting cards into compartments increases the facility of a like activity both in speed and in regularity in the typewriter reaction: the causes of transference are the formation of a habit of direct reaction without useless concomitants, a resulting equitable distribution of attention to the various possible reactions, and the consequent power of concentrating the attention throughout the series.] **A. H. Pierce.** 'Gustatory Audition; a hitherto Undescribed Variety of Synæsthesia.' [Description of case, with tests. 'Gustatory' is used in a wide sense, to cover the four taste qualities, the cutaneous qualities of pressure and temperature, and the tactual-motor experiences of texture, consistency, etc. These concomitants are aroused by spoken words or nonsense-syllables and by musical and other non-vocal sounds. They are constant, oftentimes difficult to describe, and definitely localised. The author inclines to a physiological interpretation.] **W. C. Ruediger.** 'The Period of Mental Reconstruction.' [Questionary returns on the "experiences that are met along the highway towards intellectual maturity". The mode lies between a gradual development, receiving noticeable impetus without great change by occasional incidents, and a development characterised by a small number of well-marked transitions at irregular intervals.] Psychological Literature. **J. W. Baird.** 'The Proceedings of the Philadelphia Meeting of Experimental Psychologists.'

JOURNAL OF PHILOSOPHY, PSYCHOLOGY AND SCIENTIFIC METHODS. iv., 15. **W. James**. 'A Word more about Truth.' [Elucidates the nature of continuous or 'ambulatory' relations, *e.g.*, spaces, and the fallacy of opposing the static abstraction to the concrete description of the same thing, and defies intellectualists to state "just how the real, genuine and absolutely 'objective' truth is constituted and established".] iv., 16. **R. B. Perry**. 'A Review of Pragmatism as a Philosophical Generalisation.' [Aims at 'interpretation rather than refutation' and concludes that 'in so far as pragmatism cleaves to empiricism it must forsake its subjectivist theory of knowledge,' but fails to carry conviction from lack of exact references for its 'interpretations'.] **W. T. Bush**. 'The Continuity of Consciousness.' [Doubts whether it is not a case of the 'psychologist's fallacy'.] **R. W. Sellars**. ''Prof. Dewey's View of Agreement.' [Discusses paper in iv., 8.] iv., 17. **E. B. McGilvary**. 'Prolegomena to a Tentative Realism.' [Polemic against idealism (Berkeley and Strong), denial that realism duplicates its 'object,' but no attempt to show how realism gets to it or establishes its reality.] **W. A. Brown**. 'The Pragmatic Value of the Absolute.' [As illustrated by the case of a seventeenth century divine, William Ames, who was a pragmatic and pugnacious Puritan, but derived much vigour from his belief in the orthodox 'god' with all the theological attributes Prof. James thinks useless.] **W. James**. 'Prof. Pratt on Truth.' [Disclaims the description of pragmatism assumed in iv., 12.] iv., 18. **L. P. Boggs**. 'The Psychology of the Learning Process.' [It is dealing "not with ideas and their associations primarily, but with the turning of subjective ideas and sensations, inexpressible in words, into the objective expressible".] **F. C. S. Schiller**. 'Pragmatism *versus* Scepticism.' **J. E. Russell**. 'A Last Word to Dr. Schiller.' **F. C. S. Schiller**. 'Ultima Ratio?' [Concludes the controversy started in iv., 2 and continued iv., 9. I. Schiller inquires whether if truth is to be defined as 'thinking the environment as it is' this is the *sole* condition of truth and the agent's purpose is wholly irrelevant, or whether it is merely necessary to recognise *also* a reality other than that purpose, and thinks that Russell has changed his ground. Gives a pragmatic rendering of the phrase 'not knowing the way out' when 'lost,' and asks Russell to define his position more clearly as regards scepticism. II. (*a*) Russell denies that he has changed his ground. (*b*) He has meant all along that though there is a subjective side to knowing, yet the objective side alone makes an idea 'true'. (*c*) He thinks the pragmatic interpretation of 'not knowing the way' too paradoxical. (*d*) He rejects the pragmatist distinction between claims and truths, because pragmatism cannot consistently distinguish between a truth and its verification. (*e*) He concludes that the meaning of terms has been so changed by the pragmatist that there can be no 'reasoning together' with the intellectualist. III. Schiller replies (*a*) that Russell's original phrase was ambiguous: (*b*) that Russell has made no attempt to evaluate the subjective side of knowing and that his doctrine of truth is mere assertion: (*c*) that Russell has overlooked the transitions between the functional and the potential value of truths, and illustrates: (*d*) that consequently pragmatism can recognise *verifiable*, while intellectualism must recognise *unverifiable* truths, which are meaningless to the pragmatist: (*e*) that both parties have the duty of explaining current usage, but that while pragmatism is able to do this, no coherent intellectualist theory of truth has yet been devised.] iv., 19. **G. S. Fullerton**. 'The Doctrine of the Eject.' [Solipsism is a highly unnatural doctrine which no one really believes, but we have no other stepping-stone to a knowledge of other minds than the argument from analogy.] **F. L. Wells**. 'Standard Tests of Arithmetical Associations.' **G. A. Tawney**.

'Prof. Fite on the Exaggeration of the Social.' [*Cf.* iv., 15.] Seventh meeting of the Western Philosophical Association. iv., 20. **J. E. Boodin.** 'The New Realism.' ['The real is the intelligible or noumenal, not the mere immediate.' 'Real objects are never constituted by mere sense-perception. . . . They presuppose creative purpose and become objects only for a self-realising will.' The method of knowledge is pragmatic, but to conceive (with Dewey) 'the relation of knowledge to reality in terms of end and means or purposive control, dodges the real issue of realism and is merely psychological'.] **E. A. Kirkpatrick.** 'A Broader Basis for Psychology Necessary.' [Suggests the term "organosis" 'to signify the adaptive functioning of any organism or organ without reference to whether the activity involved is conscious or unconscious'.] **W. James.** 'The Absolute and the Strenuous Life.' [*Cf.* iv., 17. Both absolutism and pluralism 'confirm our strenuous mood'. Pluralism actually demands them . . . monism permits them. . . . Though the absolute *dictates* nothing, it will *sanction* anything and everything after the fact. Pluralism's 'permanent inferiority from the pragmatic point of view' is that it has not 'the wide indifference that absolutism shows' and 'has no saving message for incurably sick souls'.] iv., 21. **G. S. Fullerton.** 'The Doctrine of the Eject'—II. [Criticism of the 'doctrine of direct communion' as stated by A. E. Taylor.] **A. W. Moore.** 'Prof. Perry on Pragmatism.' [Reply to articles in iv., 14 and 16. Protests against the attribution to pragmatists of a belief in a pure 'noetic interest,' and in a rigid reality antecedent to judgment. Also points out that whereas pragmatists insist on the problems of doubt, inquiry and error, their critics restrict themselves to the nature of truth as a ready-made product.] iv., 22. **E. B. McGilvary.** 'The Physiological Argument against Realism.' [Concludes that "since the physiological argument is based on facts that necessitate the priority of objects to the awareness of them, realism is correct in maintaining that objects are temporally independent of the awareness of them".] **R. Haynes.** 'Attention Fatigue and the Concept of Infinity.' [It is "the metaphysical correlate of that which on the psychological side is the smothering of attention".]

International Journal of Ethics. Vol. xviii., No. 1. October, 1907. **W. Fite.** 'The Theory of Democracy.' [The conception of democracy as majority-rule rests on a mechanical and mathematical view of human nature and social relations: the conception of it as individual liberty depends on transcending this point of view. "Whereas the aims of individuals are necessarily conflicting when the individual is defined from a mechanical standpoint, they become, when he is conceived as a conscious personality, necessarily co-ordinate. Social unity is then not the antithesis of individuality, but rather the correlate of a completed individuality."] **D. J. Brewer.** 'Law and Ethics.' [A defence of, and appeal to, the lawyer as the instrument or agent of society for the promotion of justice.] **R. F. A. Hoernlé.** 'The Conception of Possibility in its Relation to Conduct.' [The central point in the problem of freedom is the 'possibility of acting otherwise'. Such possibility is not theoretical or logical, but practical or real. It does not express ignorance or incomplete knowledge of the conditions, but the practically undetermined, in the determination of which consists *volition*.] **W. L. Sheldon.** 'Modern Classifications of Duties and Virtues.' [Many of these are unsatisfactory owing to their lack of definite principle. This department of ethics lags behind others, being governed by tradition and utility rather than systematic inquiry. The topic is a suitable one for a congress of ethical teachers and writers.] **Helen Wodehouse.** 'Fragments of a

Statement of Idealism.' [Suggestion of a semi-popular approach to the doctrines of idealist ethics.] **F. N. Freeman.** 'The Ethics of Gambling.' [Discusses the *differentia* of gambling and the ethical implications of its various characteristics, and applies the principles so ascertained to some practices involving or related to it, especially speculation. Speculation performs an economic function, but is at least very closely allied to gambling.] **J. J. Findlay.** 'The Parent and the School.' ["Every school should have some small body of persons directly concerned in its fortunes and exercising some control over it, and this body of governors or managers should be largely chosen by the parents who intrust their children to the school."] **A. C. Pigou.** 'Some Points of Ethical Controversy.' [Deals briefly and for the most part negatively with the method of determining the nature of good, and its application to the questions, wherein good consists, and how one person's good is related to another's.] Book Reviews.

Revue de Métaphysique et de Morale. 15e Année. No. 5. Septembre, 1907. **M. Calderoni.** 'La prévision dans la théorie de la connaissance.' [In defence of Pragmatism, combats the contention that all beliefs are not previsions, nor do they all imply previsions. The principle of Contradiction is only applicable to previsions. The effort to separate out the previsive element of knowledge reaches its most advanced expression in Pragmatism. Author endeavours to elicit this previsive element in the various forms of judgment.] **P. Lacombe.** 'De l'esprit classique dans la Révolution française (selon Taine).' [The facts are against Taine.] **Charles Rist.** 'Économie optimiste et économie scientifique.' [Economists not concerned with the redivision of revenues among individuals, but with the fixing of the price paid for services. An equilibrium in such matters impossible. Legal interference with salaries would only affect the distribution of wealth injuriously. On the other hand, action regarding the distribution of property or the conditions of the struggle for life might have useful effects.] Études Critiques. **Louis Weber.** 'L'évolution créatrice par Henri Bergson.' Questions Pratiques. 'Les syndicats de fonctionnaires et les transformations de la puissance publique.'

Revue de Métaphysique et de Morale. 15e Année. No. 6. Novembre, 1907. **A. Job.** 'L'œuvre de Berthelot et les théories chimiques.' [Berthelot occupied not, like other chemists, with forms, but with changes. He shows that mineral and organic matter are subject to the same forces, their synthesis possible by the same means; and establishes the relations between chemistry and the other sciences.] **H. Delacroix.** 'Analyse du mysticisme de Mme. Guyon.' [Extremely interesting account of the various stages of mysticism culminating in pure passivity which is, at the same time, divine activity.] **E. Boret.** 'L'évolution de l'intelligence géométrique.' [Has reference to M. Bergson's account of geometrical intelligence: that account only adequate for the geometrical intelligence of the Greeks.] **E. Mallieux.** 'Le rôle de l'expérience dans les raisonnements des juriconsultes (*suite*).' Études Critiques. **E. Chartier.** 'Essai sur les éléments principaux de la représentation par O. Hamelin.' Questions Pratiques. **P. Lapie.** 'Réforme électorale.' Tables des Matières. Supplément: Nécrologies. [O. Hamelin. Sully-Prudhomme. J. Freudenthal.] Livres, etc.

Revue de Philosophie. 1er Novembre, 1907. **X. Moisant.** 'The Problem of Evil.' [As the question of predestination under our conception of the terms—as the pre-Copernican question of the support of

the earth—so the question, 'Why did not God create a better world?' is essentially irrational, and leads to absurdity in whatever way it is answered. In another and a 'better world' the inquirer himself would be ruled out of existence; for him individually there is no possible existence except in this world of which he now forms part. But no man can absolutely take that to be 'better' which imports his own non-existence. The problem of evil, so put, is unreal and essentially insoluble. The real problem is, 'How can I make the world and myself better?'] **C. Sentroul** and **A. Farges**. 'Kantian Subjectivism.' [Is Kant refuted simply by insisting on the immediate perception of objective reality?] 1er Decembre, 1907. **E. Peillaube**. 'The Organisation of the Memory, the Fixing of Impressions.' **P. Duhem**. 'Absolute and Relative Movement.' [Views of the Arabians and of the Schoolmen as to the *locus* of the universe. Does a body's place move with the body, or does the body move from one fixed place to another?] **R. Meunier**. 'The Psychology and Philosophy of N. Vaschide.' [A brilliant young doctor at the *École des Hautes-Études*, lately dead.] **A. Fontana**. 'Course of M. Durkheim at the Sorbonne.' [A totemist view of the origin of the belief in Souls and of Religion. "The soul is nothing else than the totemist principle incarnate in each individual and individualised in him."]

Archives de Psychologie. Tome vii., No. 1. **E. Lombard**. 'Essai d'une classification des phénomènes de glossolalie.' [It is possible to work out a classification on strictly psychological lines, without regard to the time and place of the phenomena. First stands the stage of inarticulate vocal utterance: groans, hysterical convulsions, interjectory cries, musical automatisms. Glossolalia proper then appears at three levels: as pseudo-language, pure and simple, in which there is no determinate correspondence between articulation and idea; as a system of neologisms, glossopoiesis, illustrated by the Martian of Hélèn Smith; and as an intermediate form, in which incoherence is mingled with occasional neologistic formations. Finally, xenoglossia shows itself, first, in the introduction of single foreign words, more or less corrupted in form; then in linguistic counterfeits like the Hindoo texts of H. Smith; and lastly, if the phenomena are genuine, in the gift of tongues. The author cites cases throughout, suggests possible explanations, draws analogies from childhood, dream, automatic script and drawing, etc.] **A. de Maday**. 'Les bases psychologiques de la sociologie.' [The paper is mainly concerned with the Somlo-Pikler controversy. Biological and psychological sociology are alike scientific; in general they cover the same field, though in detail they are complementary. In the present state of our knowledge, the psychological method is to be preferred: the one department in which the science has reached positive results, political economy, is wholly grounded on psychology; and the biologising writers inevitably slip into psychology. The fundamental law of sociology, that man does nothing for nothing, is the counterpart of the physical law of conservation of energy.] **A. Lemaitre**. 'Un nouveau cycle somnambulique de Mdlle. Smith: ses peintures religieuses.' [Detailed account of the genesis and progress, so far as the present complexity of conditions allows them to be traced, of Hélène Smith's religious paintings: a carbon head of Christ, oil-portraits of Christ and the Virgin, and an oil-painting of Christ at Gethsemane.] Recueil de faits: documents et discussions. **T. Jonckheere**. 'Mémoire visuelle remarquable chez un enfant.' [Brief account of associative memory (coloured pictures of postmen and their countries) in a normal boy of five.] **C. Werner**. 'Réunion des philosophes de la Suisse romande: Rolle, 13 Juin, 1907.' Bibliographie. Notes diverses.

Revue Philosophique de la France et de l'Étranger. 32me Année. No. 4. Avril, 1907. **G. Palante.** 'Anarchisme et Individualisme: Essai de Psychologie Sociale.' [Distinguishes "Anarchisme" as a social and economic doctrine, based on optimistic idealism, from "Individualisme" as an intellectual attitude towards society resting on pessimism. From the one standpoint the opposition of the individual and the common life presents an insoluble contradiction, from the other the admitted conflict of the state and the individual still leaves room for society.] **J. Sageret.** 'De l'Esprit Magique à l'Esprit Scientifique.' [Continued from March number. Many modern ideas in magic, religion, mysticism, poetry and even metaphysics are a survival of savage superstition. Pleasure in the language of poetry, *e.g.*, is a relic of the time when such language was taken literally. The spirit of magic anthropomorphic, based not on truth but on what M. Ribot has called "la logique des sentiments" and on finality. Evolution of objective standpoint traced in the sciences. Is this tendency anti-social? No: it leads to a disinterested sociology.] **A. Bauer.** 'La Transformation des Idées et le Public.' [Maintains the thesis that the ideas of beauty, truth, goodness and justice do not come from a transcendent world to penetrate, ready made, the consciences of men. They are the slow, uncertain, often contradictory products of human intelligence, regarded not as individual caprice but as public judgment.] Revue Critique. **P. Fauconnet.** [Westermarck's 'The Origin and Development of Moral Ideas' reviewed and analysed. "The facts and the details of thought" highly valuable. But a certain disproportion between the extent of the researches and the poverty of the ideas, which owe little to such extensive investigations. This due to the empirical and individual standpoint.] Analyses et Comptes Rendus. Revue des Périodiques Étrangers. [*The British Journal of Psychology.*] No. 5. Mai, 1907. **B. Bourdon.** 'La Perception du Temps.' [Chiefly introspective observations. Discusses short periods and positions separated by brief intervals, criticising the rhythmic theory of Wundt and the tension and intensity theories of Münsterberg, Schumann and Lipps. Worthlessness of the distinction between empty and filled space. Long periods and succession at long intervals, past, present and future, and the representation of time considered. Space and time analogies and mutual irreducibility.] **G.-L. Duprat.** 'La Spatialité des Faits Psychiques.' [Controverts M. Bergson's theory of "a psychical activity devoid of any spatial element," and maintains "the rights of physiological psychology".] **Th. Ribot.** 'Sur Une Forme d'Illusion Affective.' ["Illusions affectives" are misjudgments regarding (i.) our specific emotional experiences, and (ii.) the dispositions in which these "poussées brusques et courtes" arise. Causes (i.) secondary: innate weakness of judgment, the impossibility of direct comparison, suggestion; (ii.) fundamental: the impossibility of knowing our subconscious life in its entirety. Illusions sometimes useful.] Observations et Documents. **J. Rogues de Fursac.** 'Notes de Psychologie Religieuse: Les Conversions.' [Recounts an interview with four Welsh converts. The general uniformity of the symptoms in conversion points to a natural explanation in the subconscious, working, *e.g.*, through the silent influences of racial predisposition, education and environment.] Analyses et Comptes Rendus. Revue des Périodiques Étrangers. No. 6. Juin, 1907. **J. J. Van Biervliet.** 'La Psychologie Quantitative (2e étude): La Psychophysiologie.' [Shows the futility of expecting too definite numerical conclusions from reaction time experiments and from the measurement of conscious operations. "Psychophysiologie" too much under the influence of "metaphysical" (*i.e.*, non-empirical) conceptions.] **E. Bernard Leroy.** 'Nature des Hallucinations.' [Neither intensity, belief, localisation nor richness of content essential. Views

of Taine and Brierre de Boismont criticised. Two fundamental conditions, springing alike from the increase of automatic and decrease of voluntary attention, *viz.*, (1) an abnormal synthesis of images, and (2) "a kind of spontaneous *déclanchement* of automatic attention, grouping round the chief image elements similar to those which, in general perception, cluster round sensation".] **L. Dupuis.** 'L'Hallucination du Point de Vue Psychologique.' [Develops Baillarger's view that hallucination depends on the relaxation of attention and a resulting "extériorité spontanée de la représentation". Criticises Tamburini and Taine. Hallucination involves an identical content, and "the mental attitude of perception," but without the conscious direction and supervision of ideas by volition, or the "personal synthesis" which results in the "feeling of continuity".] Analyses et Comptes Rendus. Table des Matières. No. 7. Juillet, 1907. **F. Le Dantec.** 'L'Ordre des Sciences.' [Proposes the following arrangement: (1) Psychology and logic considered as a means to science; (2) the exact sciences as the product; and (3) biology (including the mental sciences, psychology, logic, etc.) as the application of (2).] **A. Binet.** 'Une Expérience Cruciale en Graphologie.' [A comparison of the addresses on letters received by the writer furnishes an experiment which eliminates unconscious inference from the matter written. Influence of social conditions on handwriting. Defence of the art.] **A. Chide.** 'La Conscience Sociale; Catégories Logiques.' [Doctrine of a social pluralism. The ideas on which distinct societies rest cannot be unified either on rationalistic or naturalistic grounds. They are subject to the incalculable forces of personality.] **Probst-Biraben.** 'Le Mysticisme dans l'Esthétique Musulmane.' Revue Critique. **G. Rageot.** 'L'Évolution créatrice d'après H. Bergson.' Analyses et Comptes Rendus. [Including Joachim's 'The Nature of Truth'.] Revue des Périodiques Étrangers. No. 8. Aout, 1907. **E. Boirac.** 'La Cryptopsychie'. [Divides the sub-conscious into (1) "cryptopsychie élémentaire" (*e.g.* "unconscious sensation" in anæsthesia); (2) "cryptopsychie synthétique". What the sub-conscious explains (*e.g.* phenomena of distraction, instinct, habit, hypnotism, hysteria). Theories of the sub-conscious reviewed—Janet's "intra-normal," spiritualistic "supra-normal" theories; "pantheistic" tendency of M. A. Goupil's view. The desideratum a theory "which will serve to direct research by suggesting exact experiments". **F. Paulhan.** 'Herbert Spencer d'après son Autobiographie.' [Spencer's work more interesting than his life. Combination of simple principles with vast detail. His synthesis too simple for the wealth of phenomena included; too abstract: this appears in the limitations of his culture, *e.g.* his misconception of history and the classics. His taste mediocre and spoiled by the critical, analytic spirit. In his extreme intellectuality and his devotion to work he resembles Spinoza. He will not lose by his biography.] **R. Cousinet.** 'Le Rôle de l'Analogie dans les Représentations du Monde Extérieure chez les Enfants.' [Criticises the theory of "mediate analogy"—*viz.*: that the child uses analogy like the adult as a means of correlating unknown phenomena with known in the pursuit of knowledge; and proposes a theory of "immediate analogy". The child begins not with differences but with the homogeneous, and the early stages in education consist in the discovery not of analogies between what at first appear distinct kinds of phenomena, but in the discovery of differences in what at first appear similar.] Analyses et Comptes Rendus. Revue des Périodiques Étrangers.

Zeitschrift für Philosophie und Philosophische Kritik. Bd. cxxxi., Heft 1. Oct., 1907. **Richard Falckenberg.** 'Nachruf auf Ludwig Busse.' [A brief obituary notice of the late editor of the *Zeitschrift*.

Prof. Busse died on 12th September, 1907, having not quite completed his forty-fifth year. A follower of Lotze, he taught philosophy for five years at Tokyo, lecturing in English. On the question of the relations between mind and body he upheld the theory of mutual interaction.] **Aloys Müller.** 'Ueber Atomismus und Mechanismus.' [Atomism, defined as 'an expression of the discontinuity of matter,' is, contrary to the opinion of Ostwald and others, a necessary scientific hypothesis. But it cannot adequately express the ultimate reality of things because it assumes the objectivity of space. Now space (and time) while doubtless possessing a certain objectivity, are, as we know them, so conditioned by our subjectivity as to veil the real world from us. Mechanical causation is also an incomplete expression of the truth, as is shown by the irreversibility of physical sequences—a fact proved not only by experience but by the calculus of probabilities—and also by the law of evolution.] **Ernst Mally.** 'Das Mass der Verschiedenheit.' [An investigation by one of Meinong's school, of mathematical rather than philosophical interest.] **E. Dutoit.** 'Bericht über die Erscheinungen der französischen philosophischen Literatur im Jahre 1903.' [Sabathier's 'Philosophie de l'Effort' seems to be, according to this critic, the most interesting French philosophical work of 1903.] **Max Frischeisen-Koehler.** 'Die historische Anarchie der philosophischen Systeme und das Problem der Philosophie als Wissenschaft.' [A well-written and stimulating essay. The writer begins by expressing his satisfaction at the revival of philosophical studies which has succeeded to the utter discredit that attended them within living memory in Germany. Yet the great historic systems of philosophy still remain hopelessly irreconcilable, and the critical attempt to find a new basis for philosophy in epistemology has merely resulted in equally irreconcilable theories of knowledge. At the same time the steady progress of universally admitted scientific truth accentuates the bankruptcy of pure speculation. Nevertheless the writer bids us not to despair. We must expect the evolution of philosophy to be slower than that of any science. Nor is the contrast so great as is commonly supposed. Scientific men are far from being agreed either about the methods or the ascertained results of physical investigation. One regards ether and atoms as proved; another would banish such ideas altogether. The subject is to be continued in another number.] Rezensionen, etc.

Zeitschrift f. Psychologie. Bd. xlv., Heft 5. **M. Levy.** 'Studien über die experimentelle Beeinflussung des Vorstellungsverlaufes.' [The method of abruptly called-out single words may evoke three forms of reaction: the normal (sense of insult, or mere surprise), the intermediate, physiological or psychological (questioning interpretation, or acceptance with brief comment), or the pathological (picking-up of the word into the flight of ideas). The associations aroused are classified, from the subjectivist standpoint, as (1) those of personal narrative, (2) those of personal reference, (3) neutral and impersonal: these last may be object, verbal or dissociative associations.] **R. Hamann.** 'Über die psychologischen Grundlagen des Bewegungsbegriffes,' II. [Movement perceived upon an empty background (spot of light in dark) depends upon a vague appreciation of the contour of the field of vision. Movement may be predicated on the basis of 'common feeling,' with reproduction (but without the actual presence) of a visual movement-image. In plastic art, movement is suggested through the observer's imitative tendency; in pictorial, either by incomplete or by unclear representation. The paper contains explanations of most of the familiar illusions of movement.] Literaturbericht. Bd. xlv., Heft 6. **E. Becher.** 'Kritik der Widerlegung des Parallelismus auf Grund einer

"naturwissenschaftlichen" Analyse der Handlung durch Hans Driesch.' [From his scientific standpoint Driesch employs two criteria which decide him against parallelism: the criterion of individuality of correlation, and that of an historical basis of reaction. Neither of these, however, is incompatible with mechanism. The real difficulty appears when we combine the criteria and ask: how is individuality of correlation mechanically possible on the ground of the historical basis of reaction? The answer is found in the assumption of a preformation which is not absolutely individualised but covers a whole series of related connexions of stimulus and reaction: the action-stimuli work as units only within the limits of such preformation; in other cases the elements of a stimulus-complex work as elements. Driesch's position thus proves to be untenable, even when made stronger than he himself had made it. In general, Driesch has brought no proof of the impossibility of an antivitalistic standpoint. Hence vitalism cannot be regarded as a secure basis for interaction.] **W. Warstat.** 'Die Bilderrahmen; ein Kapitel angewandter Æsthetik.' [Criticises Foth's doctrine that the frame should further the associations upon which the æsthetic illusion depends. A frame, first of all, brings the picture as whole into relief (*cf.* the gold frames of the picture galleries). It may then work in two ways: by colour and by line or ornament. The colour affects our mood, either harmoniously (gold suggests pomp and a certain stiffness) or by way of contrast; the ornament suggests sympathetic movements, slow or quick, violent or feeble, delicate or clumsy.] Literaturbericht.

## IX.—NOTES, NEWS AND CORRESPONDENCE.

## MIND ASSOCIATION.

THE Annual General Meeting of the Association will be held in Trinity College, Cambridge, on Friday, 12th June, at 3 P.M. Members who attend will have an opportunity of hearing a philosophical discussion later in the afternoon.

Those who wish to join the Association should communicate with the Hon. Secretary, Mr. HENRY STURT, 5 Park Terrace, Oxford; or with the Hon. Treasurer, Dr. F. C. S. SCHILLER, Corpus Christi College, Oxford, to whom the yearly subscription of one guinea should be paid.

Members resident in U.S.A. may, if they choose, pay their subscription ($5) into the account of the Treasurer (Dr. F. C. S. SCHILLER) at the Fifth Avenue Bank, corner of 44th Street, New York, U.S.A.

TO THE EDITOR OF MIND.

May I be allowed to comment briefly on two points raised by Mr. W. D. Ross's review of my translation of Aristotle's *Metaphysics A* in MIND, N.S., No. 65. I do so merely to make my meaning clearer on certain very fundamental questions, and not in the least in any spirit of controversy. For Mr. Ross's kindness in pointing out a number of misprints and slips in my version I am exceedingly thankful, and I am even more obliged to him for convincing me that one or two of my interpretations are open to serious question. But I think he has failed to understand (1) why I have expressed so unfavourable an opinion of Aristotle's mathematics, and (2) what I meant by saying that his logic is marred by biological prejudices.

As to (1) I do not, of course, forget that Aristotle is the author of the *Physics*, and it is largely the way in which such conceptions as that of change are treated in that work which has led me to an unfavourable estimate of his capacity for exact thought. *E.g.* it seems to me an indispensable condition of clear thinking about change and motion to recognise that Zeno's famous "paradox" of the flying arrow which is "at rest" in every moment of its flight is no paradox at all, but a perfectly correct piece of logical analysis; Aristotle's treatment of the matter is, I suppose, very largely responsible for the popularity of the

unintelligible notion of a "state of change" which has haunted philosophy from his day to ours, and has done more than anything else to prevent most philosophers from forming correct views about change and motion. (See Russell's *Principles of Mathematics*, pp. 332, 333.) But without travelling outside the limits of *Metaphysics A*, it is easy, I think, to point to a glaring instance of Aristotle's looseness of thought in which he has been unconsciously followed by Mr. Ross. Mr. Ross says, commenting on p. 128, Note 2, of my translation: "Aristotle's contention is that *any* 2 (definite or indefinite) must contain two units. This contention is surely true." Now, to my mind, Mr. Ross and Aristotle are here saying something which is manifestly not true, and their criticism is therefore perfectly worthless as directed against Platonism. For one thing 2 does *not* "contain" two units, or, in fact, any units at all. A *pair* of things, *i.e.* a collection which *has* the cardinal number 2, is a collection of two members, but the number 2 is not a collection at all, but the *number* possessed by every collection which is a pair (*i.e.* a collection of two and only two non-identical members). And, for another, there are not many "twos," as Aristotle and Mr. Ross assume, but only one "two". There are many different *pairs* of things, but there is only *one* characteristic which is shared by all these pairs and by no other collections whatever, *viz.*, the cardinal number which each of them possesses, and it is this unique entity which is "*the* number 2," or, as Plato might say, "*the* Idea of 2". It is the entity which may be defined thus: "if $u$ be a class, and if $a$ is a $u$, and $b$ is a $u$, and $a$ is different from $b$, while it is also true that if $x$ be a $u$, then $x$ is either the same as $a$ or the same as $b$, 2 is the cardinal number of the $u$'s". The expression "any two" is thus simply senseless, since there is only one 2 in the logical universe. And the attempt to save Aristotle's "face" is a failure. As for my own note, if Mr. Ross had quoted the whole sentence of which he gives a part, he would have seen that its express purpose was to point out that what is formed by addition is not a cardinal number, but a collection or class which *has* a certain cardinal number.

As to (2). I may just mention some of the prejudices, unfavourable to sound logic, which the bulk of logicians have inherited from Aristotle, and which have struck me as psychologically explicable by reference to his biological training and interests. Foremost among them is the doctrine that all propositions have positive existential import -*i.e.* that the subject-class of every proposition contains at least one member. It is this erroneous assumption which accounts for such flaws in traditional logic as the doctrine that an A proposition is convertible, and the retention of the four fallacious syllogistic modes in which a particular conclusion is deduced from purely universal premisses. We have to thank it also for the perverse refusal of so many philosophers to admit the identity of the universal with the hypothetical proposition, as well as for all the confusions of the type of metaphysics which attempts to define truth by "reference to reality". (I speak with all the more feeling of these confusions because I have known myself what it is to share them.) This assumption that every class which figures as a subject of a proposition "exists," seems to me clearly a legacy from the logic of Aristotle, and it is not unnatural to account for it as the natural presupposition of a thinker primarily trained in the natural sciences, where the only classes of objects which come in for attention are, as a matter of fact, existent classes. A connected prejudice is the assumption that the subject-attribute proposition is the one universal type of all propositions, with its inevitable corollary that the fundamental metaphysical category is that of substance and attribute. This assumption, again, seems to me a natural consequence of looking at the problems of

science generally from the standpoint of descriptive natural history, in which it is just the subject-predicate proposition that is most prominent. It was in this domination of Aristotelian thought by the subject-predicate proposition with "existent" subject which I had in mind in writing the words referred to by Mr. Ross, and I do not see that their force, whatever it may be, is lessened by appealing to the predominance of mathematical illustrations in the *Posterior Analytics*. Of course, in any case, examples of rigidly demonstrated results are bound to be taken from the mathematical sciences; my point was that Aristotle's conception of the nature of the proposition and of the scope of deduction is defective in just those respects which might be expected of a thinker who came to the study of logic with an unconscious bias derived from an early training in biology and natural history.

Incidentally, may I suggest that at 987 and 10 *μετριώτερον* perhaps derives some confirmation from a rather similar use of the word in Sextus Empiricus *adversus grammaticos*, 288. *ὁ μὲν σκηνικὸς ἀναγορευθεὶς φιλόσοφος ἔτι μετριώτερος φαίνεται, λέγων μὴ εἰδέναι ᾧ προσεύχεται*, which appears to mean "the poet who got the title of the 'philosopher of the stage' will be found even more unsatisfactory, since he confesses that he does not know who it is to whom he prays". (Sextus had just said that the opinions of the poets about theology are *worse* than those of illiterate men.) Possibly, however, *μετριώτερος* is here ironical, "even more modest in his pretensions". And may this not, after all, be the sense of the phrase of Aristotle; the philosophers enumerated "treated the subject less pretentiously" than their successors; the implication being that their "unpretentious treatment was also inadequate". Of course I should assume that if *μετριώτερον* is the right word in one passage, the other readings represent *deliberate* conjectural emendations of copyists who were dissatisfied with the text before them.

A. E. Taylor.

## 'IF' AND 'IMPLY,' A REPLY TO MR. MACCOLL.

In the January number of Mind, Mr. MacColl accuses me of holding premisses from which it would follow that either every red-haired Englishman is a doctor, or every English doctor is red-haired. The reason why Mr. MacColl supposes me to hold these premisses (which I do not hold) is that he has failed to grasp what seems to me a vital distinction, namely that which I call the distinction between *propositions* and *propositional functions*. The nomenclature is unimportant: but what is important is to remember that what Mr. MacColl calls a proposition is usually something which I should not call a proposition, so that when my statements about propositions are interpreted as applying to what Mr. MacColl calls propositions, the result, naturally, is apt to be curious.

Let us illustrate the distinction between propositions and propositional functions by the case which Mr. MacColl chooses. He says (p. 152): "Take the two statements 'He is a doctor' and 'He is red-haired,' each of which, observe, is a *variable*, because it may be true or false. Is it really the fact that one of these statements implies the other?" It will be observed that what I affirm as quoted by Mr. MacColl on the previous page) is, that "of any two *propositions* there must be one which implies the other". It by no means follows that of any two *statements* one must imply the other. Mr. MacColl assumes it undecided who 'he' is to be, for as soon as it is decided, the statement ceases to be 'variable'. Now I should not call 'he is a doctor' the expression of a proposition unless, from the context, it is known who 'he' refers to, and then it is a mere abbreviation for (say) "Mr. Smith is a doctor". This *is* a pro-

position, but it is not variable: Mr. Smith either is or is not a doctor. Of the propositions 'Mr. Smith is a doctor' and 'Mr. Smith is red-haired,' it is easy to see that one must imply the other, using the word 'imply' in the sense in which I use it. (That this is not the usual sense, may be admitted; all that I affirm is that it is the sense which I most often have to speak of, and therefore for me the most convenient sense.) I say that $p$ implies $q$ if either $p$ is false or $q$ is true. This is not to be regarded as a proposition, but as a definition. Now consider 'Mr. Smith is a doctor' and 'Mr. Smith is red-haired'. Four cases are possible, namely: (1) both are true, (2) both are false, (3) the first is true and the second false, (4) the first is false and the second true. In cases (1) and (2) each implies the other according to the above definition. In case (3) the second implies the first; and in case (4) the first implies the second. These facts are all immediate consequences of the above definition of 'implies,' together with the fact that a disjunction is true when either or both of its alternatives is true. Hence in all four cases, at least one of our two propositions implies the other.

It will be seen, however, that we do not always have "'He is a doctor' implies 'he is red-haired,'" nor do we always have "'He is red-haired' implies 'he is a doctor'". We have always one or other (or both), but not always one, nor yet always the other. Hence, when 'he' is not specified, we cannot affirm "'He is a doctor' implies 'he is red-haired,'" nor yet "'He is red-haired' implies 'he is a doctor'". But when 'he' is unspecified, 'he is a doctor' and 'he is red-haired' have no definite meaning: they are forms awaiting determination. They are what I call 'propositional functions,' not what I call 'propositions'. It is customary to suppose that 'propositions' are whatever is either true or false, but 'he is a doctor' is neither true nor false until 'he' is specified; for this reason, is seems undesirable to call it a proposition. I should not, however, object to Mr. MacColl's calling it so, if he would realise that it is something different from the things that are true or false, and from the things that I call propositions.

The formal statement of the above is as follows. Let $\phi x$, $\psi x$ be two propositional functions, *i.e.* expressions which, so soon as we give a definite value to $x$ (such as 'Mr. Smith'), become propositions. Then for every possible value of $x$, either $\phi x$ implies $\psi x$ or $\psi x$ implies $\phi x$. But it is not in general true that either $\phi x$ implies $\psi x$ for every possible value of $x$, or $\psi x$ implies $\phi x$ for every possible value of $x$. Hence, if $x$ is not assigned, we cannot assert '$\phi x$ implies $\psi x$,' and we cannot assert '$\psi x$ implies $\phi x$,' because sometimes the one is true and sometimes the other, according to the value assigned to $x$, and we can only assert an ambiguous expression containing an undetermined $x$ when, however, we may determine $x$, the resulting proposition is true—as, for example, when we say '$x$ is $x$'.[1] We thus arrive at Mr. MacColl's division of "statements" into the three classes of *certain*, *doubtful* and *impossible*, but "statements" must be understood as meaning "propositional functions," not "propositions". A propositional function $\phi x$ is *certain* when all its values are true, *impossible* when all its values are false, and *doubtful* when some of its values are true and some false. But the values themselves, which are "propositions," are subject, not to this threefold division, but merely to the twofold division into *true* and *false*.

B. Russell.

[1] For further explanations on the above question, see my *Principles of Mathematics*, pp. 12, 13, 22.

## LOGICAL IMPLICATION.

The point raised by Mr. MacColl in the January number has a certain interest for Formal Logic, and its bearing upon the views of Mr. Russell shows how easily a formal point may become more than formal. Perhaps a further remark with regard to it may be useful. Taking the instance given by Mr. MacColl, the essential steps seem to be the following:—

He is either a doctor or not a doctor, and he is either red-haired or not red-haired (1).

He is either a doctor or not a doctor or red-haired or not red-haired (2).

(He is either a doctor or not red-haired) or (not a doctor or red-haired) (3).

Either (if he is red-haired he is a doctor) or (if he is a doctor he is red-haired) (4).

Mr. MacColl seems to deny the legitimacy of the transition from (3) to (4); and this is a view that may very well be taken. But are not the other steps at least equally open to question? The transition from (1) to (2) seems to depend on the principle that the weaker 'or' can always be inferred from the stronger 'and'. For purely formal purposes whatever exactly these are this principle may be true; but if anything more than a formal use is to be made of such a process, it might be well to remember the saying of Mr. Bradley, 'I confess I should despair of human language, if such distinctions as separate "and" from "or" could be broken down'.[1] Again, it may be doubted whether the transition from (2) to (3) is legitimate. The former affirms that there are four alternative possibilities, one of which must be true. The latter, on the other hand, seems to affirm that there are two alternative possibilities; but leaves it uncertain what the two possibilities are. This compound disjunction surely does not convey the same meaning as the simple one. The implication of the former is that, if three of the alternatives are rejected, the fourth must hold. The implication of the latter is that, if one of the alternatives is rejected, a second must hold; but that it remains uncertain what the two alternatives are that are thus related. Personally I am inclined to think that the really serious fallacy is in this transition from (2) to (3). To take another illustration, if I say 'It is either white or black, or else it is either red or green,' I do not mean quite the same thing as when I say 'It is either white, black, red or green'. Or again, if I say 'a figure is either round or not-round and it is either square or not-square,' it is surely not legitimate to infer 'It is either round or not-square, or else it is either square or not-round'.

The general moral of the discussion appears to be that we should never be sure that what seems to be a formal change is purely formal. In particular, it leads us to see that the implications of a double disjunction have not yet been sufficiently brought out by logicians.

J. S. MACKENZIE.

## THIRD INTERNATIONAL PHILOSOPHICAL CONGRESS.
### HEIDELBERG, 1908

The Third International Philosophical Congress is to take place at Heidelberg from the 1st to the 5th September. On Monday, 31st August, there will be an Evening Reception, and an excursion has been arranged for the afternoon of Saturday, 5th September.

There are to be Four General Sittings of the Congress, and it will be

[1] *Principles of Logic*, book i., chap. iv.

divided into the following Sections for Special Work:—1. History of Philosophy; 2. General Philosophy, Metaphysics and Philosophy of Nature; 3. Psychology; 4. Logic and Epistemology; 5. Ethics; 6. Æsthetics; 7. Philosophy of Religion.

It is intended on this occasion, as formerly at Geneva, to combine with this Congress the International Congress for the History of the Sciences of Nature.

*General Secretary:*—Dr. Elsenhans. *President:*—Dr. Windelband.

## FIRST INTERNATIONAL MORAL EDUCATION CONGRESS.

London, September 23rd-26th, 1908.

*President:*—
*Hon. Treasurer:*—Lord Avebury.
*General Secretary:*—
Gustav Spiller, 6 York Buildings, Adelphi, London, W.C.
*Hon. Secretary for Great Britain:*—
Harrold Johnson, B.A., 6 York Buildings, Adelphi, London, W.C.
*Hon. Secretary for the United States:*—
Dr. D. S. Muzzey, 30 Lincoln Terrace, Yonkers, New York.

The First International Moral Education Congress will be held September 23rd-26th, 1908, in London.

With a view to offering, as a basis for discussion, a comprehensive survey of the problem of Moral Education, short papers on the following subjects are being arranged for: School and Home, School Organisation, Methods of Training and Teaching, Juvenile Literature, the Ethical Penetration of the whole Curriculum, the Relative Merits of Direct and Indirect Moral Instruction, Separate Moral Instruction, Ethical Subjects in present-day Curricula, Civics and Patriotism, The Relation of Æsthetic and Physical to Moral Education, the Education of the Morally Backward, Moral Education in Schools and Colleges. In connexion with some of the above subjects Questionnaires will be widely circulated. A few model moral instruction lessons, in several languages, will also be arranged for.

Two practical suggestions are to be discussed—the founding of an *International Journal of Moral Education* and of an *International Moral Education Bureau*.

Applications for tickets, 10s. 6d. (2½ dollars) each, should be sent, in Great Britain, to the General Secretary, and in the United States to the Hon. Secretary there.

*The Congress will limit itself to matters which equally interest all who value the ethical aspect in school education, without assuming that religious and philosophical questions are not of importance in Moral Education, and without excluding references to religious and philosophical points of view.*

All communications and inquiries should be addressed to the Hon. Secretary for the United States or to the General Secretary, who will also endeavour to assist in making arrangements for hotels, excursions, cheap travel, and the like.

## A SUPPOSED QUOTATION FROM KANT.

In Mind, N.S., vol. xiii., p. 456, I drew attention to the sentence, "The understanding makes Nature, but does not create it," which had frequently been ascribed to Kant, and asked for the reference. I had myself been

unable to trace it back beyond T. H. Green, who not only quotes it as Kant's, but gives it in German: "'Macht zwar Verstand die Natur, aber er schafft sie nicht'. The understanding 'makes' Nature, but out of a material which it does not make" (*Prolegomena*, § 11; MIND, O.S., vol. vii., p. 9).

My question met with no response until a few days ago, when Prof. Pringle-Pattison informed me that he had noticed almost the identical words in Erdmann's *Grundriss der Geschichte der Philosophie* (2nd ed., 1870, vol. ii., p. 316; 3rd ed., 1878, vol. ii., p. 319): "Darum schafft zwar der Verstand die Natur nicht, aber er macht sie". As used by Erdmann the words do not purport to be a quotation from Kant.

W. R. SORLEY.

MIND

A QUARTERLY REVIEW

OF

PSYCHOLOGY AND PHILOSOPHY

## I.—MARTINEAU AND THE HUMANISTS.

By Leslie J. Walker.

There does not seem at first sight to be a very close connexion between the Idio-psychological Ethics of Martineau and the theory that human values and human purposes permeate and affect even our most remotely cognitive activities. Yet the aim, the method, and the fundamental principles of the great English moralist of the last century are analogous to those of the Humanists; and what the latter are now saying of Truth is very similar to what Dr. Martineau said years ago of Moral Worth. So striking, indeed, is this resemblance that a student of the history of philosophy can hardly fail to connect the new theory of knowledge which Messrs. James and Schiller are at present endeavouring to force upon our notice, with the philosophical standpoint adopted by Martineau as the basis of his ethical teaching.

If there was one thing in which Martineau believed more firmly than in anything else, it was the dignity of human nature, a dignity which from the outset he conceived to be inseparably bound up in the freedom of man's will. He saw clearly, too, that the materialistic and pseudo-scientific theories of his day meant, not only the downfall of religion, but also the ruin of morality. Consequently he made it his life-work to defend the notions of God, Freedom and Moral Responsibility from the attacks of Sceptic and Positivist.

Already, indeed, there stood within the arena of philosophic strife one combatant who had fought strenuously and persistently against the common enemy. But abroad Absolutism was discredited; and in England, though defended with all the ardour of converts by those who had taken up the Kantian

position, it was already showing signs of disintegration—the inevitable mark of error and decay. A philosophy of the Absolute with the scant respect it shows for the personality of man, whom it seems to reduce to a mere function of a universal Consciousness, could never satisfy, nay, must ever evoke a protest from a mind such as that of Martineau scarcely less vigorous than that which was aroused by Scepticism.

In truth, Martineau's philosophy is, like Humanism, a reaction against Absolutism as well as against Materialism and Scepticism; and like Humanism, too, it marks a return to the *human* point of view. As opposed to belief in a universal and intrinsic Ground, both philosophies are individualistic; and, instead of looking at the universe from the standpoint of an Eternal Ego, both prefer to take as their basis the inner life of man. Martineau, indeed, does not go so far as to adopt the Protagorean principle that 'man is the measure of all things'—a principle which Mr. Schiller and his friends have borrowed from a bygone age and taken as their watchword, but he does maintain that the morality of human conduct is determined solely by human needs and human springs of action.

Idio-psychological Ethics, in fact, are so called precisely because they are founded on an introspective study of man's nature as revealed in his own self-consciousness. They are opposed to anything which begins with a study of Nature or of God *ab extrinseco*. And the Humanists, or Pragmatists—for practically the names are synonymous—are only applying the same principle to the Theory of Knowledge when they assert that Truth also is a 'value' which depends for its specific nature upon the purposes and needs that govern and direct our thinking. Man is prone to generalise; and, when once the psychological method had been applied to those "unique and unanalysable qualities" 'right' and 'wrong' which we predicate of our actions, one can hardly be surprised that others should extend its use to the parallel, and, so it is said, equally unique and unanalysable conceptions of the 'true' and the 'false'.

At any rate, Martineau and the Humanists both adopt the psychological method and the psychological point of view. Both are convinced—explain the facts how you may—that in man alone is to be found the clue to the universe in which we live; and though the former never attempted to apply the method to cognition in general, he has at least built up by its means that system of Morality which he propounds in the second volume of his now famous *Types of Ethical Theory*.

Martineau starts with a psychological analysis of our moral

onsciousness, and finds that there are within us certain reative impulses or springs of action, which he divides into our kinds, *viz.*, Organic Appetites and the impulse to unelective physical activity in general; Passions,—antipathy, ear, anger; Affections,—parental, social, and compassionate; entiments,—wonder, admiration, reverence. These four inds of impulse are connatural and instinctive; and are yled '*Primary Springs of Action*,' since it is from them that l more complex and interested springs are supposed to be eveloped, and from both that all action proceeds. They are ssentially conative, being, in fact, 'the dynamic sources of ction within the mind'. In its origin a spring consists nerely in an impulse toward 'an unselected form of activity,' n indeterminate striving in which we are impelled by some nner need toward an end of which we have at most but a im awareness. But with the satisfaction of its vaguely-felt emands the spring becomes more clearly defined. Pleasure, oo, ensues, and is remembered; so that when a spring hich has once attained its end, is re-aroused, there arises ith it a pre-conception of the experience to which it led, nd this experience is added on as an idea to the spring f action, and itself becomes an end. In this way *secondary* prings arise; and what was formerly 'a movement of mere eed now becomes a movement of desire'. Thus the Organic ropensions give rise to the love of money, pleasure and ower; the Passions to malice, vindictiveness and suspiciousess; the Affections to sentimentality; the Sentiments to the ve of self-culture, æstheticism, and interest in religion.

These 'springs of action,' essential to Martineau's system nce they lie at the foundation of his theory of Morality, ocupy in Humanism a place no less important. These same onative tendencies of our nature, expressive of our human eeds and purposes, constitute for the Humanist the forms hich we seek to impose upon the plasticity of matter, the deals which we ever strive to realise in the concrete. At rst vague and indefinite, their significance manifests itself nore and more clearly with the growth of experience; hile their primary aim throughout is *action*, action which nall enable us to live by fashioning our environment to suit ur needs.

The emphasis which both Martineau and the Humanists nus lay upon conation, marks a reaction in favour of the votional side of our nature. In Absolutism volition and the motions are subordinated to Thought, which, as synonynous with Being, constitutes the Universe. Against this dentification of our nature with one of its functions Martin-

eau and the Humanists alike protest, and, as is usually the case in reactionary movements, tend to go to the other extreme and subordinate thought to volition. The intellect, for example, in Idio-psychological Ethics is concerned chiefly with ways and means and is not the Moral Faculty; while in Humanism it is wholly subservient to action, the love of knowledge as such there becoming, like the love of pleasure, a secondary and derived impulse.

As yet, however, we have not touched on the question of Morality proper. Morality, according to Martineau, is based on 'Moral Worth,' a peculiar quality of the springs of action, which are therefore the proper objects of moral judgment. Bentham's 'motive and intention,' the Scholastic 'object, end, and circumstance' are made to depend for their morality in this view upon the different springs which they call into operation, and which range themselves as 'persuasives' or 'dissuasives' in regard to any contemplated line of conduct. "Threats are converted into fears, and bribes into covetousness, while both are confronted by the internal affections, compassion, a sense of justice, and a reverence for right."

Over all these springs conscience presides, sometimes declaring in favour of the persuasives, sometimes in favour of the dissuasives, according to their relative moral worth. Morality, therefore, necessarily implies choice and is impossible without the simultaneous presence of at least two conflicting springs of action, between which we are free to choose. Moral choice, however, must not be confused with Prudential choice, for Prudential or Hedonistic choice is based merely on 'Resultant pleasure,' *i.e.* on the pleasure of successful or realised impulse which can vary in quantity only, not in kind. A choice of this sort is really no choice at all, but at bottom nothing more nor less than 'self-surrender to the strongest impulse'. Moral choice, on the other hand, is a genuine choice. To be moral we must be free to follow the prudential *or* the ethical promptings of our nature, we must be at liberty to obey the strongest *or* the highest motive.

Similarly the Humanist teaches that to acquire knowledge we must be *free* to act in different ways and on different hypotheses or postulates in order to learn by experience which of them will enable us to deal most satisfactorily with our surroundings. Morality and knowledge are alike conditioned by the possibility of voluntary choice; and just as the transition from the non-moral to the moral state occurs where spontaneity gives place to free volition, so the transition from mere sense-experience to cognition occurs when blind striving is superseded by selective action.

Relativity, too, is characteristic both of 'Moral Worth' and of Humanistic Truth. Moral Worth, we are told, can no more belong to one spring alone than "fraternity can belong to a solitary man, or a convex surface present itself without a concave". "It is inherent in a conflicting pair of springs as in a dual object, and not only could not be cognised, but does not even exist till they fall in combination. No spring has any definite moral value of its own, but merely a relative value which belongs to it only when some other spring is aroused to dispute its claim to control the course of action." Hence, the Moral Worth of any one spring depends for its specific nature upon the particular spring with which for the moment it happens to conflict; in itself no spring is either good or bad.

No less emphatic is the Humanist in denying the existence of absolute Truth. Truth, he says, belongs to a proposition or hypothesis only in so far as it serves our human purposes better than some alternative proposition or hypothesis. It is a value which is entirely dependent upon its power to satisfy human needs. Since, then, our needs may change, and are never completely satisfied, there is no theory in science and no axiom in philosophy which may not be so modified at some future date as to render our present conception of it not only inadequate but false.

Now, from the relativity of Moral Worth, Martineau infers that in his system 'a graduated scale of Excellence' must take the place of that co-ordination and classification of the virtues which we find in other systems; and a like consequence would seem to follow in regard to the relativity of truth. This the Humanist admits, but as yet he has made no attempt to carry his theory into practice. The careful analysis and classification of springs of action, so characteristic of Martineau's system, is absent in Humanism. There is no analysis, no comparison, no classification of the purposes and needs which control our cognitive processes; nor are we as yet provided with even a tentative scale of 'Utility' or 'Workability,' which can be applied to theories, laws and axioms. Yet a scale of cognitive values and a table of the relative urgency of different needs would seem to be of vital importance if all truth is relative and if the needs by which it is determined are so numerous and so different. It may be pleaded in reply, perhaps, that Humanism is yet in its infancy, and that there has been no time to examine its working in detail. But the fact of the matter is that while Martineau found it difficult enough to distinguish and classify springs of action with a view to arranging them in a scale of moral excellence, it would be still more difficult, if not im-

possible, for the Humanist to construct a corresponding scale from the point of view of the theory of Knowledge.

If we compare the Humanist definition of Truth with Martineau's definition of Moral Worth, the chief difference between them is apparently this, that whereas the good is that which satisfies the highest spring, the true is that which yields the *greatest sum of satisfactions*. (Truth in this sense is not, of course, the Truth in which Martineau believed—his 'Humanism' was merely a moral Humanism;—but it is Truth for the Humanist.) The 'sum of satisfactions' which is here laid down as the criterion of truth, makes it practically impossible to estimate relative Truth. Martineau found it impossible to classify complex springs of action, and omitted them altogether from his tabulated scale of Excellence; but for the Humanist all springs are complex, and a theory to be true must satisfy all our needs. Moreover, we have, or are supposed to have, an intuitive judgment of the Relative Moral Worth of different springs, but no such judgment can be appealed to in the case of truth-values. Again, for the comparison of the truth-values of propositions, theories and such-like 'claims to truth,' a preliminary scale setting forth the relative importance of different satisfactions, is needed. Not even this, however, has so far been attempted, nor does there seem much chance of it being successfully drawn up, especially while there is so much difference of opinion in regard to the rank of 'intellectual satisfactions'. And even if we suppose the difficulty of settling the rank of various satisfactions to have been surmounted, what Martineau says of a scale of ethical principles is equally true in the sphere of knowledge, namely, that it is only when "the cycle of original experiences has completed itself, when all the internal springs of action have had their mutual play and exhausted their series of permutations," that there will be resources for forming a scale of relative values. Since, then, experience is ever growing, and the permutations and combinations of hypotheses, principles, and laws is ever increasing in number and variety, a scale of truth-values, if such could be constructed at all, would still be tentative only, and always liable to modification. Yet, in spite of all this, a scale of some kind is indispensable for the theory of knowledge, if we accept the pragmatic doctrine that 'truth is made by postulation in accordance with our needs and by verification through experiences which satisfy those needs; because, until it is completed, and the propositions, laws and theories which are to occupy the highest place determined, truth will be nothing more than probability'.

A volitional theory of Knowledge and Morality thus involves the relativity of both truth-values and moral-values to one another together with the negation of all absolute criteria, in place of which a table of such values must needs be substituted. But it involves more than this. From the assertion that truth and morality are determined by our needs, or by the dynamic sources of action within the mind, there follows another kind of relativity, namely, relativity to the self-conscious ego that strives to realise its needs in thought and in action—a relativity which we usually term Subjectivism.

Martineau would doubtless have vigorously repudiated this consequence of his theory. Yet he declares that Morality is a 'Value,' and a value, though unique and irresolvable, must be a value for something. Since, then, Moral Worth belongs strictly to springs of action which correspond to and are expressive of our *needs*, that *something* would seem to be the need which the authoritative and categorical judgment of conscience pronounces to be relatively more urgent or more fundamental. But, if this be so, since our needs are subjective, and since effect and circumstance are carefully excluded by Martineau from the sphere of morality proper, moral right and moral wrong, being determined by subjective conditions, must also be subjective.

In the same way it follows that Truth is subjective, if once we grant that all our cognitive activities are intrinsically modified by our purposes and needs, and that it is impossible to distinguish in the content of thought that which is due to the object from that which is due to the mind. For, in this case, we can make no allowance for the mental or personal element, so that thought will be essentially anthropomorphic in 'content' as well as in 'character'. And if, in addition to this, we grant Dr. Schiller's postulate in regard to the evolution of knowledge, *viz.*, that it is we ourselves, as purposively active beings, who have imposed and *do* impose upon matter those forms which we are accustomed to attribute to the object; that matter was originally wholly indeterminate and plastic; and that the 'common world' in which we believe, has been built up solely by the action and interaction of the minds of men and of the ancestors from whom they have been evolved; then, for us Truth will be *purely* subjective, a mental product which is made and not found or learned from objects; and which is expressive, therefore, not of the qualities and essences of external things, but of the Ego itself with its characteristic functions and its need-expressive purposes.

A denial of the objective validity of Truth is thus the inevitable outcome of the theory that Truth is a value whose content is determined by subjective conditions, just as an Ethical Subjectivism is the necessary consequence of the corresponding doctrine that the real objects of moral judgment are the springs of conduct whose 'worth' is determined by conscience on purely internal grounds. And though the Humanist may appeal to an Arbeits-welt, or to the common consent of humanity in general and of experts in particular, and Martineau to a Divine Being who manifests Himself in conscience and so confers upon its dictates unanimity, universality, and objectivity; yet neither can by this means restore to his theory the validity which his subjectivism has taken away. For a 'common world' which has been built up by the intercourse of different minds will be neither more nor less subjective than the elements of which it is composed. Different thinkers may agree to accept certain 'claims to truth' and to reject others, but unanimity so secured bespeaks merely similarity in mental structure, nothing more. And Martineau's appeal to 'the Voice of God' if it proves anything at all, proves too much. For, apart from the *Deus ex machina* implied in such an answer, it postulates a closer union with God than facts will vouch for, and savours of Ontologism, if not of something an individualist like Martineau would have considered far more erroneous, Absolutism.

There are, in fact, it seems to me, only two ways out of the difficulty, either a return to Absolutism or a return to Aristotle. The first alternative would provide a common Ground which, by an immanent revelation of Itself in finite centres of consciousness, would secure an approximate conformity of their thinking to its own, and would Itself provide an objective type or ideal which they were ever striving to realise in themselves. The second would give to Morality and Truth objective validity by making their content depend upon determination by objective entities and their relations. Either alternative, however, involves the surrender of the psychological method in part at least. Aristotelian and Absolutist are agreed that the knowledge of Subject and Object is immediate and is simultaneously developed. We can no more infer the nature of objects from the knowledge we possess of our own inner life, as the Idio-psychological method claims to do, than we can apply our knowledge of objective laws unreservedly to the self-conscious activity of the Ego.

Absolutism, however, goes further than this. It asserts not only that *in knowledge* subject and object imply one another and are essentially relative, but that the relation be-

tween them is *intrinsic* and *constitutive in a metaphysical sense.* Knowledge is but one aspect of the Whole. Nature, man, and God, are not merely in essential relation, but are *ontologically* continuous, and, at bottom, one and the same. Now, it is by no means the same thing to say that a subject implies an object, and an object a subject, as to say that Object apart from Subject, or Subject apart from Object, have no entity at all. The latter assertion seems to me to imply, as it did to Martineau, a pantheistic unity. Consequently, though the Absolutist solution is a possible one if considered in the abstract, and has actually been suggested by Prof. Jones in his centenary Lecture on Dr. Martineau as the natural complement to the Ethical principles of the latter, it is a solution which secures objectivity at the cost of both personality and freedom. Prof. Jones, of course, does not admit this conclusion; he even assures us that he would renounce his Idealism if he thought it involved such a consequence. Yet it is difficult to see how personality and freedom are to be saved if 'All' is reducible to One, and if the 'differences' of that one are, in reality, but immanent and intrinsic modifications or manifestations of Itself. Since, then, personality and freedom are so dear alike to Martineau and to the Humanist, they would, I think, prefer to make any sacrifice rather than take refuge in Absolutism.

The alternative solution — a return to Aristotle — would seem, therefore, at least to merit consideration. It, too, demands a sacrifice; but it does not involve the surrender of any notion so fundamental as those of personality and freedom. An Aristotelian Philosophy gives to both a full and real significance, and at the same time, is willing to grant that springs of action are to some extent determinants of morality, and that human needs and human purposes at any rate condition and direct the cognitive activities by which Truth is attained. But it does not make the springs of action either the *sole* determinants of morality or the *proper* objects of moral judgment, nor does it assign to human needs and purposes a predominant and exclusive influence in the determination of Truth. On the contrary, it insists that to the object must be allotted its proper place both in the sphere of knowledge and in the sphere of morality; and, in doing so, it is only reasserting on behalf of the object a right which common sense has always recognised.

In the first place, Common Sense never makes the spring of action the object of its moral judgments, as witness the strangeness with which these judgments strike us when expressed in such a way as to make them harmonise with

Martineau's theory. We are told, for instance, that "a child, not above the seduction of the jam-closet, finding himself in that too trying place and succumbing to temptation, has scarcely sucked the traces from his fingers before he is ready to sink into the earth with compunction, well knowing that the appetite he has indulged is meaner than the integrity he has violated" (p. 45). Or again, it is said that "When historians tell us of the plague-tainted city in which panic-stricken men and women herd together and drive away terror by drunken carouse and ribald song, we are appalled to think of appealing to as low a pleasure against so august a fear" (p. 45). Now, what child, I would ask, ever compares his appetite with his integrity, or what man condemns the revelry of plague-stricken multitudes because it implies that pleasure has been preferred to fear? Or, if you wish to put the question to a practical test, ask a friend on what grounds he condemns, say, Hooliganism. He may reply, as it were intuitively, that violently to disturb the equilibrium of a peaceful wayfarer, to pounce upon him, and generally maltreat him, is on the face of it immoral; or he may tell you that Hooliganism is an infringement of the liberty of citizens. He may remind you of the precept, 'Do unto others as you would be done by'; or he may enlarge upon the disastrous effects such actions would, if permitted, be likely to have upon society at large. But I doubt whether Socrates himself could elicit from him the answer that Hooliganism is immoral because it is prompted by vindictiveness or love of power, which impulses, when in conflict with social affection, ought not to be allowed to control our actions. We do at times approve and condemn *motives*. But a *motive* signifies an end in view, some action, some effect, or some state of consciousness, which we seek to realise, and not an impulse or spring of action. Springs of action, if condemned at all, are condemned because they prompt to inordinate actions, actions which lie outside the natural and appropriate sphere of influence, so to speak, of the Spring. And this sphere of influence is determined not relatively, but absolutely; not intuitively, but on extrinsic grounds which take into consideration object, end and circumstance.

Common Sense, then, is opposed to a Preferential Morality based on the relative worth of springs of action, and it is no less opposed to the Humanist doctrine of Relative Truth depending upon its power to satisfy human needs. Take any book on Science, Philosophy, or Morals. Why do we accept or reject, approve or condemn, the theories and principles advanced by its author? Our decision is based on

intellectual grounds, not on emotional or volitional considerations. We do not ask what emotional satisfaction the work in question may arouse within us—that will depend largely on its style; nor do we ask whether the author has proved what we wanted him to prove. We examine the accuracy and care with which experimental data have been collected and arranged; we ask ourselves whether the reasoning is valid, whether conclusions follow logically from their premises. We look out for obscurities, contradictions, unwarranted assumptions, ambiguities in the use of terms. We consider the bearing of the theories advanced upon other accepted theories in the same and also in other spheres of knowledge. This done, if the work as a whole and each part of the work is clear and convincing, we accept its doctrines as true; otherwise we reject them individually or *en masse* as false or at least unproven. And throughout the process, if it is truth that we are seeking, we shall exclude as far as possible the influence of our emotions and our will, and strive to found our judgment solely on objective evidence, *i.e.* on the evidence of the *things* themselves which are there discussed, as they present and reveal themselves to our intellects. Again, our assent, if given at all, will be given unconditionally. Decisions in matters of fact and of the explanation of fact are as a rule absolute, not relative. When we compare one theory with another and say that 'this' is *more satisfactory* than 'that,' or that 'this' *works better* than 'that,' we mean that, though there is not sufficient evidence to convince us of the truth of either, yet one has more evidence in its favour than the other; it works better, in the sense of being more consistent in itself, with fact and with accepted truths.

The Pragmatist is compelled reluctantly to admit the apparent 'absoluteness' of some truths, *viz.*, of axiomatic truths; but, in order to make his principles universally applicable, he assigns to these a postulatory origin in a prehistoric past. So drastic a reform in philosophical ideas requires some justification. On what grounds, then, does the Humanist place himself in open antagonism to the philosophy of common-sense? Why does he despise the claims of the object? Why strive to recast Truth, as Martineau recast Morality, in a subjective mould? The arguments of both are psychological. It was introspection that laid bare the ultimate and dynamic sources of action within the mind, and it is introspection that has revealed the thoroughly purposive nature of all cognition.

Now, in Martineau's case it would seem that his introspec-

tion was at fault. Moralists, with few exceptions, agree with Prof. Sidgwick that the object of moral judgment is not the spring, but the contemplated action itself together with its foreseen effects—'effects' here signifying 'every change internal or external, immediate or indirect, which in given circumstances may be expected to result from the volition'. Martineau seems, in fact, to have confused the dynamic source of action within the mind with the determinant of action. We may grant for the sake of argument that the springs are not as in many cases they appear to be, mere class-names for various kinds of action, and it will yet be true that the real determinant of all volition proper is the idea of the action to be performed and of its consequences, since it is this idea which controls and directs, in any particular case, the spring's specific mode of activity. Parental love, for instance, may be aroused in the mother by the sight of her suffering child. But the activity which results will be indeterminate, unless there are also present to the mind general ideas (*e.g.*) of the consequences of exposure to cold and of the efficiency of clothing, and particular ideas and images connected with the means of providing for the wants of youth; and it is these ideas of effects and means in particular circumstances which really determine action—a view that is strongly confirmed by modern psychological experiment, which tends to show that not only every idea but every sensation has at least some dynamo-genetic or psychomotive force.

The springs themselves being thus indeterminate, their morality must be of a like nature. Hence, to treat of them in a special Ethics from which object, end and circumstance are excluded as unaffecting their morality, or indeed, to predicate of them Moral Worth at all, is to take a narrow and one-sided view of Morality. It is irrational to separate the 'Ethics of Character' from the 'Ethics of Conduct,' for it is by conduct that character is to a large extent built up. What we are is doubtless more important from a moral standpoint than what we do, but nevertheless it is what we do that chiefly makes us what we are. A theory of Morals, therefore, which refuses to treat of Conduct, and declines to admit the object as a determinant of morality is inadequate and false. It is useless to urge that as the spring changes the Morality changes, for it is equally true that as the 'foreseen effects' change the morality changes. The question cannot be thus summarily dismissed by an appeal to Mill's Method of Concomitant Variations. The moral value of object, end and circumstance *must* be taken into consideration; and were it

not that Martineau in constructing his Scale of Excellence has in reality allowed their influence to weigh with him, his results would have been far more at variance with Common-Sense Morality than they actually are.

A similar criticism may be passed on the Humanist. His theory of truth is based on a psychological analysis of cognition. And just as Martineau confuses the dynamic sources of action with the determinants of morality, so he confuses the dynamic sources of cognition with the determinants of truth. Our needs certainly prompt us to seek knowledge and truth, and our purposes determine what kind of truth it is we seek. But neither purposes nor needs determine what we find to be the truth. Only the intent of thought is determined by them, not its content. As the Humanist says, we frame hypotheses, and seek in Nature their confirmation. But an hypothesis should not, and as a rule does not cause us to mutilate facts, nor do we reject facts which fail to harmonise with our hypotheses. On the contrary, the validity of hypotheses depends entirely upon whether experience will confirm them; in other words, it depends upon whether the nature of objects when apprehended by the mind agrees or disagrees with what we *supposed* their nature to be. Knowledge is essentially knowledge of objects, and were it impossible for the object to determine thought, cognition in the strict sense of the word would be non-existent. Sometimes, it is true, subjective conditions, prejudices, preconceived notions, habitual associations, do affect and may even wholly determine the content of thought. But they do so *per accidens*, and at the cost of truth; so that when we have reason to suspect that such influences have been at work we feel bound to discard our conclusions as false, or at any rate doubtful. The Humanist is right, in saying that all thought is purposive. We might even concede to him that in a sense 'human needs and human purposes permeate even our most remotely cognitive activities'. But he is wrong in inferring from this that the *content* of thought is affected by our purposes and needs, except in so far as they decide what questions we ask and what answers we *expect*. The answers as such, are determined solely by the object. Often enough they fail to satisfy our purposes and invalidate altogether our hypotheses, so that we have to start again on new lines, and look for other explanations which will better harmonise with our facts.

Again, in the inferences which the Humanist draws from his psychological analyses, he is, like Martineau, led astray by his exaggerated esteem for the dignity and all-pervading

influence of human personality. This it is which has caused him to neglect the real significance of the object in knowledge, and this it is, too, which has caused him to overlook the fact that knowledge is mediated not only by sensory images but by intellectual ideas, the *species intelligibiles rei* without which the nature of object could never be apprehended. In his energetic contempt for the pure and passionless 'thought' of the Absolute, he practically dispenses with intellect. The reaction against Intellectualism which Humanism embodies, is so violent that the functions of thought proper have been lost sight of and man is pragmatically identified with the volitional and emotional side of his nature. Dr. Schiller describes the intellect as 'a bundle of habits partly cognitive and partly volitional,' and Prof. James maintains that all ideas are but useful symbols, which, like the 'faint copies' of Hume are valid only if verified by sensations. Sense-experiences and symbolic processes together make up our cognitive apparatus: there is no need of intellectual apprehension. The correspondence-notion of truth is abolished once for all. Truth consists in experiences which satisfy our needs, and in symbolic reasonings which lead to such experiences. Experience and experiment, it is admitted, imply reaction on the part of the object. But why reaction upon a *rational* being should not result in intellectual ideas as well as sense-impressions, or how sense-impressions alone can give us anything worthy of the name of knowledge, we are not told. Absolutism exaggerated the function of the intellect; consequently the intellect must be degraded and belittled, if only to annoy the Absolutist.

Martineau, too, attacks the jurisdiction of the intellect. Though a firm believer in 'faculties' and in the specific difference between intellect and sense, he denies that intellect is a moral faculty. His arguments are far more clear and his use of terms far more precise than those of Humanism, which, despite its origin in the pragmatic principle of Peirce, is prone to ambiguity. "The knowledge which we have of relative right and wrong in the springs of action is," he says, "a unique and irresolvable kind of knowledge, introducing us to a quality neither given in perception nor accessible by inferences, and therefore requiring a special word to denote the function of our nature which secures its presence" (p. 407). The intellect has nothing whatever to say in regard to Moral Worth. By no process of reasoning could it ever arrive at anything beyond the 'true' as opposed to the 'right'.

The reasoning here is easily understood; but is it valid?

Granted that our notions of right and wrong are unique and irresolvable; that they cannot be analysed into a genus 'conformity' and a difference 'in regard to our rational nature as a whole,' or a genus 'fitness' and a difference 'for the attainment of our ultimate end'; granted that they are neither "given in perception nor accessible by inference" from the relation between God and man, between Creator and creature; I still think that though a special *word* may be *convenient*, a special function of our nature is *not* required to secure the presence of these unique and irresolvable notions, if such they be. Turn to any work on Metaphysics and you will find many such notions, 'being,' 'necessity,' 'cause,' 'possibility,' and the like. Why, then, should it be necessary to postulate a special Moral Faculty to give us the notions of right and wrong? There is, moreover, a department of Ethics in which the intellect does exercise jurisdiction. Conscience informs us only of the relative superiority of impulse over impulse. It tells us, for instance, that Social Affection is to be preferred to the 'Love of Ease,' but it does not tell us in what Social Affection consists. It is by the intellect that the proper object or sphere of action of each spring is decided; and the intellect has also to settle all questions as to the quantitative limits of the springs, and as to the proper means for securing to them the fullest activity. Such questions, however, are said to be 'beyond the resources of morality proper,' and are referred to a subsidiary rule, the Canon of Consequences, which is 'rather of an intellectual than of a moral nature,' and does not involve guilt, if disobeyed. Yet quantitative variations and the means by which we further the activity of the springs may affect their morality. We should condemn a father who through unbridled generosity to public institutions, beggared his own children, and we may question the morality of granting immunity to the criminal who turns King's Evidence. If, then, a spring is immoral when its activity is inordinate, or when the means by which it seeks to realise itself are themselves immoral, surely the Canon of Consequences is essential to right moral judgment, and Reason has as good a claim as Conscience to be called the Moral Faculty.

Intellectualism exaggerates the functions of thought; Martineau and the Humanists, unduly curtail them; and confuse them with the functions of sense. They err by going to the opposite extreme. Man's faculties must neither be multiplied unnecessarily, nor yet must they be identified one with another or absorbed in the unity of human personality. Yet the fact that Martineau is as much the enemy of

Intellectualism in Ethics as the Humanist is its enemy in Epistemology, is significant, and is due to a similar cause, partly to his Voluntarism and partly to his rejection of the objective point of view. It is impossible to say how much Humanists and Pragmatists have learnt from the late Dr. Martineau; but this at least is clear, that they are at one with him in their methods and their aims. His Ethical Studies and their Theory of Knowledge are expressive of the same movement of thought, a movement which leads us away from Absolutism towards Individualism and toward a philosophy whose standpoint shall be at once more practical and more human. Such a movement was needed as a protest against those philosophers who persist in treating man as a mere passing wavelet in the sea of an eternal consciousness. But for a permanent philosophical position we need a *via media* which shall give to subject and object alike their due value in knowledge and morality; and such a *via media*, it seems to me, can be found only in a return to the principles which constitute the essential characteristics of the philosophy of Aristotle.

## II.—SPACE AND MATHEMATICAL REASONING.

By Leonard J. Russell.

### I.

The object of the present paper is to develop a view of space on the analogy of that of number. Empty space will be found to have just such a significance as pure number has. On such a view, those who hold, with Newton, that space is a "thing" may rightly be compared with the Pythagoreans who looked on numbers as "things".

Thus at first, numbers and things were thought of together; next, number was found not to be bound up in particular things in this way, but to apply universally. It was therefore separated from things, and reality was predicated of it rather than of things. Things somehow became real because of their participation in number. The third stage was the abstraction of number from things, and its treatment as itself a thing. In the fourth stage, number is found to be unreal until applied to a content; it is thus seen to be a mode of determination of experience, one aspect of thought about things. It is a form, giving meaning to, and existing only as it gives meaning to, the matter of experience, which on its side has no independent existence.

In the language of matter and form: the form, number, and the matter, things, were first, confused and not distinguished; next, separated and reality predicated of the form, and of the matter by its participation in the form; next, form and matter were set up as equally real, the form being looked on as itself a matter; finally, form and matter were shown as existing and getting significance, only through each other.

With space, we are at present at the third stage; it remains to take the fourth step. The view of space ultimately come to will be found to be a modification of Kant's view, a development on lines suggested by Kant's own work. Kant's theory of space is made explicitly dependent on his view of Geometry (in the Transcendental Exposition). And mathematicians, attacking Kant's theory of Mathematics

(on the basis, I think, of a mechanical interpretation), have considered that they have thereby overthrown the views of space derived from Kant: and one of Kant's critics goes so far as to say,[1] "We leave to his disciples the work of finding what remains of his theory of knowledge, of which the theory of Mathematics appears to have been an essential part". The position attacked by mathematicians is expressed by Kant thus: "An *à priori* perception underlies all conceptions of pure space. Accordingly, no geometrical proposition, as for example that any two sides of a triangle are greater than the third, can ever be derived from the general conceptions of line and triangle, but only from perception."[2] Modern mathematicians deny this. Mathematics, they say, is a pure piece of logical reasoning, self-contained, never needing to go beyond its premisses.

In what follows I shall endeavour to state two of the typical theories of Mathematics, illustrating by the criticisms passed on Kant; I shall then state Kant's theory as I understand it, and set forth what seem to be the defects of the opposing theories. This done, it will be possible to proceed with the question of space.

The theory of Mathematics adopted by M. Poincaré may be described as a compromise, fitting various elements to one another externally in order to meet the various difficulties cropping up. Briefly, Poincaré's position is this: On the one hand, only deductive reasoning can give us accuracy; and on the other hand, the syllogism can give us no new truth. Yet the syllogism is the only instrument of deductive reasoning. How then is Mathematics possible? An expedient is adopted. The significant process, in Mathematics, is that of generalising a particular proposition; the most general method of doing this, that of mathematical induction. We must then add this to the instruments we already possess. Mathematical induction is distinguished from physical induction, which cannot give us certainty: "induction applied to the physical sciences is always uncertain, because it is based on the belief in a general order of the universe, an order which is external to us. Mathematical induction—*i.e.* proof by recurrence—is, on the contrary, necessarily imposed on us, because it is only the affirmation of a property of the mind itself"—of a "power of the mind which knows it can conceive of the indefinite repetition of the same act, when the act is once possible".[3]

[1] Couturat, *Les Principes des Mathématiques*, p. 306.
[2] *Critique*, p. 25, 1st ed.
[3] Poincaré, *Science and Hypothesis*, p. 13.

So much for the instrument: how shall we be sure that our science shall be rigid? Only by fixing our definitions and hypotheses rigidly and finally at the beginning.

We have next to secure that our science shall be useful—shall be capable of application to practical questions. This object is attained by letting Nature guide us in our choice of definitions. Thus the conventions we adopt, we adopt for the sake of simplicity and convenience, taking Nature as our guide. We thus secure a system of exact and demonstrable knowledge, which we can use in experience.

Several points must be noticed. Induction is not the only method of reasoning adopted in Mathematics, nor are the others reducible to induction and the syllogism. Induction cannot give us a complete proof of any proposition. Again, the defect which it is assumed the syllogism possesses, of yielding no new truth, is not remedied by induction. Poincaré simply makes Mathematical Induction a means of grouping together an infinite number of verifications, none of which gives any new truth. But an infinite number of old things grouped together can never give a new one. If the first act can give us nothing new, it is hard to see how the "indefinite repetition of the same act" can give us anything new either. If it is the grouping together of the particular instances which is supposed to give new truth, that can only be the case if we are embracing instances which we could not by any possibility verify. In other words, an induction (meaning by that a general formula, a short expression for a number of particular facts, none of which is modified by its connexion with the formula—and that is what Poincaré's induction is) an induction from particular instances can give new truth only in so far as the new truth is left uncertain, and a matter of inference. But in Mathematical Induction, while in one sense it is true that we cannot apply the reasoning to *all* the numbers, since there is an infinite number of them, yet in another sense, in applying it to the first pair we have rendered it unnecessary to apply it any further. Finally, by Poincaré's distinction between mathematical and physical induction, he leaves it uncertain whether Mathematics *will* apply in practice. For although the foundations of our science are in close connexion with Nature, yet the science itself depends on a power of the mind, whereas its applicability to Nature depends on "a belief in the order of nature, which is external to us". And our science will then be exact knowledge merely so long as we do not seek to apply it, but will be uncertain, directly we attempt to make use of it. I may add, that this is the defect

of all those theories which make a gulf between pure and applied Mathematics.

In Poincaré's theory we have two significant elements, which however are not developed into a system. First, it is recognised that the syllogism is inadequate to the demands made on it; second, the character of Mathematics as exact is obtained by separating it from experience and making it ideal and conventional. On the other hand, only *one* new instrument, induction, is added; while the usefulness of the science is attained by making convention follow experience. These two elements in Poincaré have been followed out to their logical conclusion in Mr. Bertrand Russell's theory of Mathematics, the result of which is that pure Mathematics is completely separated from all practice, and its application in practice only justified by means of careful experiments.[1]

In the first place, to the syllogism are added the principles of deduction supplied by symbolic logic as refined and improved by Peano; secondly, the conventions adopted are not limited to those which will be useful in experience. That becomes a subsidiary question. We set up all the hypotheses we care to set up, and proceed by the principles of deduction to deduce all the consequences. Then if we want to use our Mathematics in practice, we show that certain of the hypotheses are satisfied in experience. But there is one thing necessary before we can have perfect accuracy. All our words must be correctly spelled: to put it otherwise, all our hypotheses must be rigidly laid down in terms of certain indefinables, whose sense has already been agreed on, and which are capable of being treated by the principles of deduction.

"Pure mathematics is the class of all propositions of the form, '$p$ implies $q$,' where $p$ and $q$ are propositions containing one or more variables, the same in the two propositions, and neither $p$ nor $q$ contains any constants except logical constants. And logical constants are all notions definable in terms of the following: Implication, the relation of a term to a class of which it is a member, the notion of *such that*, the notion of rela-

[1] Mr. Russell's theory brings to a head the tendency of modern Mathematics. It is not merely, says Couturat, in the preface to his *Principes des Mathématiques*, which is professedly an exposition of Mr. Russell's work, "un brillant paradox, une fantaisie individuelle et éphémère, sans racines dans le passé et sans fruits dans l'avenir, mais l'aboutissement nécessaire et le couronnement de toutes les recherches critiques auquelles les mathématiciens se sont livrés depuis un demi-siècle". Later he speaks of Mr. Russell's work as "une vaste et profonde synthèse, qui est la quintessence des travaux antérieurs, et qui manifeste l'esprit même de la mathématique moderne"—a spirit, as he says, which is diametrically opposed to Kant's theory of mathematics.

tion, and such further notions as may be involved in the general notion of propositions of the above form. In addition to these, mathematics *uses* a notion which is not a constituent of the propositions which it considers, namely the notion of truth."[1]

"By the help of ten principles of deduction and ten other principles of a general logical nature (*e.g.*, 'implication is a relation') all Mathematics can be strictly and formally deduced; and all the entities that occur in Mathematics can be defined in terms of those that occur in the above twenty premisses. In this statement, Mathematics includes not only Arithmetic and Analysis, but also Geometry, Euclidean and non-Euclidean, rational Dynamics, and an indefinite number of other studies still unborn or in their infancy."[2]

In our reasoning we are concerned, not with what individual things we are discussing—that is unimportant—but with the relations we assert to hold between them. For in every case we deal with the relations, not heeding the terms; and the relations are asserted to hold hypothetically. If $x$ is a $y$ and $y$ is a member of the class $z$ then $x$ is a member of the class $z$. This does not assert either that $x$ is a $y$ or that $y$ is a member of the class $z$, nor does it tell us anything of $x$, $y$, or $z$. And the whole of Mathematics deals with hypothetical relations, independently of the terms.

This theory seems to be the opposite of Kant's, who states that from conceptions alone Mathematics cannot advance. Kant's theory of Mathematics is therefore subjected to rigid criticism. Several definite points of his theory are attacked, and denied.

In the first place, it is denied that appeal is made to intuition in Geometry. According to Kant, the philosopher may reason about his concept of a triangle (for instance) as long as he likes, and he will never prove that the three angles are equal to two right angles; he must construct the triangle in intuition and reason about it, using his intuition to help him. Only then can he get geometrical knowledge. Intuition means for Kant, according to Couturat,[3] "the mode of knowledge which refers immediately to objects, and by which they are given individually". The sense in which this is taken may be gathered from Mr. Russell's description of it as "the mass of unexamined prejudice which the Kantians call intuition".[4] Thus Kant is placed exactly on a level with the empiricists—Couturat treats him as such, saying that it is

[1] Russell, *The Principles of Mathematics*, p. 3.
[2] *Ibid.*, p. 4. [3] Couturat, *op. cit.*, p. 290, note.
[4] Russell, p. 260.

all one whether the intuition is *a priori*, as with Kant, or empirical, as with the empiricists.

If intuition is taken in this sense, Geometry, so far from seeking the aid of intuition, is only valuable in so far as it does *not* rest on intuition. Mistakes are often made by the appeal to intuition; and as a proof that intuition is not used it has been alleged that you could draw your lines with a corkscrew and your circles with a finger dipped in ink, and reason correctly on that figure. Rouse Ball in his *Mathematical Recreations* gives several interesting examples of direct contradiction resulting from the appeal to intuition in Geometry (which I "tried," some months ago, on a Mathematical class of boys. Generally the boys expressed disgust at being "done," the intuition appealed to not being of the ordinary type). And De Morgan somewhere speaks of a construction communicated to him by a student, for the trisection of an angle, the fallacy in which took him considerable time and trouble to discover.

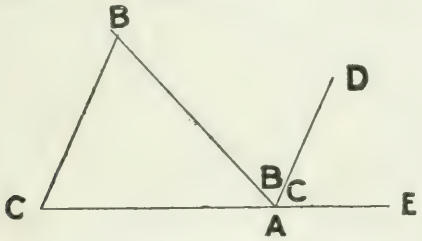
It may be replied that this misses the point, for there *is* a difference between mere empiric intuition and *a priori* intuition which Kant recognised; the recognition of which he regarded as the necessary condition of progress in the science. The advance in Geometry began, he said, when thinkers ceased simply reading off the properties of the figure empirically, but sought in the figure for the elements involved in the conception of the figure. The geometer had, said Kant, "to produce (by construction) what he had himself according to concepts *a priori* placed into that figure and represented in it, so that *in order to know anything with certainty* a priori, *he must not attribute to that figure anything beyond what necessarily follows from what he has himself placed into it, in accordance with the concept*".[1] Couturat therefore seems not to do justice to Kant's idea of intuition when he brings forward, as a proof that intuition cannot play any real part in geometrical reasonings, the fact that we may reason correctly on an inexact or even false figure, and incorrectly on an exact figure.

In the second place, it is denied that constructions must necessarily be made in Geometry. Euclid's constructions, it is alleged, are often quite arbitrary, needless, resembling a Chinese puzzle rather than a geometrical demonstration. And the tendency is to dispense as much as possible with constructions and to make propositions depend on ideas rather than on figures. Very many of the modern geometries use proofs which do not involve the appeal to a figure. And where a construction is used, the process is (or ought to be) simply that of making explicit what is involved in the hypo-

[1] *Critique of Pure Reason*, p. xii., 2nd ed.

thesis. Thus, the necessity for producing a line is simply due to the accident that only part of the line was given—a line being infinite in length; joining two points, simply amounts to saying: the two points determine a line; make it explicit. So, for instance (to take Kant's example) in proving that the three angles of a triangle make two right angles, our construction is not, to produce one side, and draw a line parallel to the third side, but to make explicit the sum of the angles—add first the angle B and then the angle C to angle A. This, if done in the way indicated, involves that the line AD is parallel to the line CB, and that the line AE is part of the straight line of which CA is a part. And the process is similar in every case. Here, it is alleged, we have a further argument against Kant's thesis. But what is this but the process Kant insisted on? Does it not correspond exactly to Kant's description of the process the geometer must follow?

Kant's insistence on synthesis and the appeal to intuition




is important, when we consider what a concept was to him. Really, Kant's "concept constructed in intuition" is equivalent to Couturat's "concept"; this is made clear by Couturat's discussion of Kant's treatment of the judgment 7 + 5 = 12 as synthetic. For Couturat, "seven added to five" and "the sum of seven and five" are exactly the same; for Kant the one is the concept constructed in intuition, the other the concept. Couturat complains that Kant admits that we must think the number twelve in the *addition* of seven and five, but not in the *sum* of seven and five.[1]

For Kant a concept was a general collection of marks, from which anything of the nature of matter (of experience) must be excluded as far as possible; and reasoning about a concept was simply the splitting up of it into its component parts. Thus he says, "The philosopher can reflect on the concept of triangle as long as he likes, and he will never get anything new. He can decompose it and make distinct the conception of a straight line, or that of an angle, or of the number three,

[1] Couturat, p. 258.

but he will arrive at no properties not found in these concepts."[1] Thus reasoning about the concept of a triangle would produce some such result as the following:—

Triangle = straight line, angle, three.
Line = length, no breadth.
Straight = between extreme points, even.

Thus so far, Triangle = { length, no breadth, between extreme points, even, angle three.

The power of analysis fails me; I cannot decompose the concept three; I do not know whether Kant would agree with my analysis of straight: but when each thing has had its marks disentangled, the triangle is simply the collection of marks. It is evident that all this can give no new knowledge—that it is a destruction rather than a construction. Kant's good sense was too great to allow him to accept this as reasoning; but he still kept the old idea of concept. Hence, he said that the concept needed construction in intuition, and that then we must reason only from those properties which accord with the concept. Kant was thus really changing the meaning of concept. And further: in any piece of reasoning his question would be, not, What are the properties I can read off by inspection of the figure I have drawn? but, What are the conditions of the possibility of the figure which represents my concept? For Kant all reasoning must be *a priori* and synthetic; in other words, all proof must be by a transcendental deduction. It must, that is, deal with elements in experience, but it must deal with them in the way of asking what are the necessary conditions to be satisfied if these elements are to be possible. We must proceed from the elements to the conditions of their possibility; and this is very different from the empirical process of reading off their properties. And in this, Kant was striving towards a conception of reasoning which is in advance of that of the modern Mathematicians.

Hence Kant would have accepted the criticisms which have been passed on Euclid's proofs, and would not have considered them at all hostile to his own theory of Mathematical reasoning. They have been put forward as arguments against Kant, and they furnish an excellent example of the ideals of modern Mathematics. "The propositions of Euclid," it is said, "involve a great number of assumptions which are incorporated into the proofs."[2] Hence the reasoning is unsound, involving as it does unexamined assumptions. These assumptions are made by an appeal to

[1] *Critique*, A 716; B 744. [2] Russell, p. 407.

simple intuition. In the first proposition of Euclid, for instance, it is simply assumed that the circles cut; there is no proof that they will do so. We see that they do: that is all there is in it. This then is an assumption made for convenience; it ought, however, to have been incorporated into the definition of space, or deduced from that definition. And so, all through, we are assuming properties of space; we have no right to call our science rigid until we have disentangled these properties—which are accepted on the word of intuition—and made them either parts of the definition of space, or consequences of that definition.

But what is the process really? Beginning with a simple conception of space we gradually go on to add elements, by considering the conditions of the possibility of the conception we have already. In the first proposition we use the fact that the circles cut; the unexpressed reasoning is that their cutting is a condition of the possibility of our conception of a straight line and two circles in a plane according to our definition and construction. It is not, that they cut in this figure and in any other figure we care to draw; but, that unless they cut necessarily, then our conceptions are impossible and meaningless, and we shall have to go back and alter some of them. Then when we have discovered all these conditions we can sum them up in a much fuller definition of space, which will serve as the starting-point of a new and similar process; but this full definition of space must be the end of our labours, and not the beginning. All through, we are on the "sure path of science"; and the criticism to be urged against Euclid is not, that it appealed to intuition in Kant's sense, but that it did not quite know what it was doing, and as a consequence, did not do it quite perfectly.

It is interesting here to note Couturat's definition of analytic and synthetic. It is to be remembered that he considers Kant to hold Mathematics to be synthetic, while he himself holds it to be analytic, in the sense of his definition.

"Whatever is contained in the definition of a concept or can be logically deduced therefrom, is analytic in character; whatever is added in virtue of a necessity beyond logic, is synthetic in character."

Again, "A judgment is analytic, when it can be deduced solely from definitions by the principles of logic; synthetic, if its demonstration (or verification) supposes other data than logical principles and definitions".[1]

[1] Couturat, p. 246.

There is no necessity beyond logic; but Formal Logic—the symbolic logic of Peano—is not the only logic; and if we admit this, then we may say, that Mathematics is synthetic (as well as analytic) in the making, and analytic only when made. And if we are Kantians, we shall see fit to add, that Mathematics is always "in the making," and that, in the making, it uses Transcendental Logic.

The existence of non-Euclidian Geometries was formerly supposed to supply a complete refutation of Kant's theory of space. But, as has been pointed out, they go to bear out Kant's theory rather than the reverse. For he admits that many geometries are possible *logically—i.e.*, geometries working out the consequences of various hypotheses; all that need be asserted is that for us to tell with any certainty which is the geometry of actual space, we must have an *a priori* intuition of space. For experiment cannot give us necessary truth. I shall therefore postpone the discussion of the significance of the various geometries until I am in a position to deal with this further aspect.

But there is still Mr. Russell's theory of Mathematics to deal with. For it asserts that final definitions *can* be given of the various elements used in Mathematics, and that there is no need to do any more than work with these elements, using the principles of deduction. This then constitutes a direct denial of our assertion that the definitions of Mathematics cannot be made final, and that Transcendental Logic must be used.

The criticism of the theory which I shall make may be summed up thus: Granted that Mr. Russell's description of Mathematics is so far correct, it is a description only of the instrument used in giving Mathematics its final form, and tells us nothing concerning the use of that instrument. Hence it is inadequate for the development of the science. As a piece of work which has its definite place in the development of Mathematics, Mr. Russell's work deserves all Couturat has said of it; but as a complete account of Mathematics, it is totally inadequate.

Briefly, Mr. Russell's theory is summed up in the words, "By the help of ten principles of deduction and ten other principles of a general logical nature, all Mathematics can be strictly and formally deduced: and all the entities that occur in Mathematics can be defined in terms of those that occur in the above twenty premisses".[1]

Pure Mathematics then consists in (1) laying down cer-

[1] Russell, p. 4.

tain hypotheses in terms of the indefinables mentioned, (2) deducing the consequences by the use of the principles of deduction. There is no need to appeal to any intuition, or to go outside the hypotheses and the principles of deduction.

Let us take an analogous case. To get every word in the English Language, take twenty-six letters, and certain principles of combination, and proceed. Pick out a letter, K. Then according to the principles of combination you can use either *l* or *h* or a vowel, etc.; choose *e*. This gives the combination, *Ke*. This is the second step; it is one word; it may be used hereafter as a single letter if we wish to shorten processes. (Similarly we can use all our words as single letters, to shorten our processes.) Finally, by successive combinations, we get, say, *Kennedy*. The defect in this process is that we get a great many more words than those in the language: and also, that we shall probably never light on *Kennedy*, however badly we want it. If we had *Kennedy*, we could see whether it was a possible word—*i.e.* whether it could be built up by our instrument; but our instrument would not aid us in discovering it. Before we have the language we need much more than this.

The same holds with Mr. Russell's argument. The whole process, he insists, is purely formal. Let us see if it is. Make it purely formal. In all your logical principles you have no concrete principle which shall tell you how to develop your subject. So you must simply proceed haphazard, as in the case of words. Choose a particular hypothesis and a definition. These will enable you to choose a principle of deduction which will serve to combine them. This combination corresponds to *Ke*. In Mathematics it will be called a theorem, and may be used as a simple result in subsequent work. Proceed thus, and you will get by degrees every proposition in Pure Mathematics. But the pity is you have got too many. Suppose you have a problem on hand—something in Physics for instance. You need at a certain point the help of Mathematics. Which result will help you? Try them and see. In Pure Mathematics itself there is no system, no clue to guide you in the search. You will have to go over every theorem—alphabetical reference-books will perhaps be compiled. It reminds one of the word-making puzzles once fashionable—to see, *e.g.* how many words can be made out of "Manchester," where, without system, we look up a dictionary and go over every word in it, ticking off those we want.

How then shall we find a shorter way than this? Unless somehow we get an idea of the sort of result we want, and

unless somehow we are able to connect this with results we already have, our logical process is useless. It is only an instrument; it needs to be directed to some end, if it is to be of any value. And it is precisely this *direction* which Mr. Russell does not account for; and precisely this direction which is the great question. Though the results can be *reduced* to twenty premisses it by no means follows that they can be *deduced from* the twenty premisses without anything else. Give Mr. Russell his definition of Projective Space of three dimensions[1] and from it ask him to evolve Projective Geometry. I do not think he could, immediately; after having dealt with Projective Geometry by using lines and figures he would be able to, with sufficient trouble—by translating, or by analogous reasoning. Then another thinker who knew no Projective Geometry could follow the deduction, but he would have strictly to follow. Then the question arises, Is this fact a consequence of imperfection in our thought, or is it a consequence of the nature of reasoning?

Mr. Russell's view rests, ultimately, on the idea that the complex must be shown to be resolvable into the simple, and can only be shown to be true as so resolved. That when we have done this, we have done all we need; we have fully accounted for the complex. To use a favourite metaphor of the Greeks, Mr. Russell thinks that when he has spelled a word he has explained it fully. The fact is, that it is the simple which needs to be explained in the light of the complex; and after we have resolved the complex into the simple—a very necessary and important part of the work, but by no means the whole of the work—we must then proceed to explain the simple in the light of the complex, show how the simple can be built up into the complex. With the complex we must begin and end.

How then has Pure Mathematics come to be what it is? A rough sketch of the development of Geometry will suffice at present. In the first place we deal with actual things, and (probably by faulty methods) prove results about them, assuming hypotheses we have not made explicit. Gradually it is found that certain hypotheses have been implied, and the consequences of these are worked out with more rigour, giving results similar to those previously obtained. Some of these hypotheses are then questioned, and it is found that others have as good a claim to be used. The consequences of these are worked out by methods analogous to those used in the previous case. Mr. Russell describes it thus:[2] "Hav-

[1] Russell, pp. 430-431. [2] P. 373.

ing found that the denial of Euclid's axiom of parallels led to a different system, which was self-consistent, and possibly true of the actual world, Mathematicians became interested in the development of the consequences flowing from other sets of axioms more or less resembling Euclid's. Hence arose a large number of Geometries, inconsistent, as a rule, with each other, but each internally self-consistent. The resemblance to Euclid required in a suggested set of axioms has gradually grown less, and possible deductive systems have been more and more investigated on their own account. In this way, Geometry has become (what it was formerly mistakenly called) a branch of Pure Mathematics, that is to say, a subject in which the assertions are that such and such consequences follow from such and such premisses, not that entities such as the premisses describe actually exist."

Thus in all this we are working either in actual contact with things, or else by methods derived from such working. And if it be objected that this historical account does not touch the question, I reply that the final stage of a product can never be taken as the thing itself, unless it contains in itself the principle of its development. And it is just this we are seeking in Mathematics, and it is to be found, I must contend, from a consideration of the development of Mathematics, rather than from a consideration of the last stage alone.

Is mathematical reasoning exact? No. It is a process of attaining exactness. We use a concept at first vaguely, and prove things of it loosely. There is no clear indication (nor as yet is it necessary) of the notions essential to the proof, or of the extent and matter for which the proof will hold. Sooner or later this leads us into difficulties, caused by our applying the theorem where it is not applicable. All definitions are of the nature of scientific hypotheses. They are tentative. When we come to a contradiction, we begin to refine. We define our concept rigorously *with reference to the things we want it to be able to prove*—notice particularly what this means; this definition needs a mathematical genius to effect it, and it is really the compression of the subsequent proofs into a small space—and gradually deduce results by proper chains of reasoning. But this does not come about mechanically. It needs men trained in mathematical methods, and above all, fully cognisant of mathematical needs.

People speak as if you had your definitions fixed simply by looking at a thing and saying clearly what you meant by

it. Then you reason about it and get new results. But the fact is not this. The definitions are the result of a long development of the subject vaguely, and then a critical regress. What is deduction? How are we able to say that P implies Q? *It is because of the process by which we arrived at P.* All deduction is a correction of our first abstraction. We have fixed our abstraction, and made it self-subsistent. We then find that it is so only on certain conditions. Unless it is certain other things it cannot be the thing we said it was. Hence all deduction is a process of rendering our first abstraction more concrete. Mathematical induction, for example, aids us in bringing to light the general principle involved in a particular proposition. This is to *concretise* the particular proposition.

Each step forward involves a partial reconstruction of the whole; elements are brought to light which were formerly neglected and which cause us to modify our view of the whole. This is what all reasoning is, and it is as true in Mathematics as in any other sphere. Examples of this process in Mathematics—and they might be multiplied indefinitely—are:—

(*a*) The modification of the definition of multiplication rendered necessary by the introduction of fractions and negative quantities in Arithmetic.

(*b*) The modification of the definition of a differential quotient consequent on the further development of the Calculus.

(*c*) The reconstruction of the theory of number necessitated by the development of the theory of functions.

It is these two last, chiefly, which have issued in the critical regress on Mathematical concepts and methods represented by Mr. Russell's work; the first is a striking instance of the Mathematical habit of widening a definition in order to make it perfectly general.

Thus Mathematics is being continually modified; its fundamental definitions—even its most fundamental—are never quite final, but are being constantly rendered more precise. There is no special virtue in the reasoning—mathemetical reasoning is just the same as any other; but the things we are reasoning about are more abstract, and the notions regarding them can be more definitely and more clearly stated, so that men need not go wrong through preconceived ideas. They do go wrong sometimes—but this is almost invariably the occasion of an advance by means of a modification of some piece of work hitherto regarded as final.

Every great thinker, in so far as he represents a tendency

and is not merely peculiar, proves something very different to what he thinks he has proved, and something far more important. Thus symbolic logic in general is in the very front of the Kantian tendency; and Mr. Russell, in attempting to do for Modern Mathematics what Euclid did for Geometry twenty-two hundred years ago, is preparing the way for a fresh advance, for another and higher reconstruction of the foundations of Mathematics in the future. And the method he exemplifies is the Transcendental Method.

## II.

Much has been written regarding the meaning of the various systems of Geometry. We have already seen how these systems arose. At first the axioms of Euclid were unquestioned; then certain of them were questioned and others set up in their stead; on the new hypotheses a different Geometry was worked out by methods analogous to those employed in Euclid's Geometry, and gradually various systems were evolved, with hypotheses differing very widely from those of Euclid. Thus the idea of "Geometry as the science of all the possible kinds of space" suggested by Kant in an early work, is rendered actual.

What is the significance of all this? How shall we choose which is the Geometry of actual space? According to Mr. Russell, the matter is one to be settled by careful measurements. "Geometry may be considered as a pure *a priori* science, or as the study of actual space. In the latter sense, I hold it to be an experimental science, to be conducted by means of careful measurements."[1]

Now in the first place, measurements will not enable us to discriminate between the different Geometries. For a great number of the geometries give us results approximating so closely to the Euclidean Geometry that no experiments are sufficiently accurate to be useful. Thus to take the classical instance, in the Geometry of Lobatchewsky the angles of a triangle would be less than two right angles. But the difference between the sum of the angles and two right angles is so slight for all ordinarily sized triangles (it varies with the area of the triangle) that we should be compelled to take extremely large triangles; and in astronomical triangles we have to use the path of a ray of light, assuming it to be a straight line. But here is a new complication; it is put by Poincaré as follows:—[2]

[1] Russell, *The Principles of Mathematics*, vol. i., p. 372.
[2] Poincaré, *Science and Hypothesis*, p. 72.

"If Lobatchewsky's Geometry were true, the parallax of a very distant star will be finite. If Riemann's is true, it will be negative. These are results which seem within the reach of experiment, and it is hoped that astronomical observations may enable us to decide between the two Geometries. But what we call a straight line in Astronomy is simply the path of a ray of light. If therefore we were to discover negative parallaxes, or to prove that all parallaxes are higher than a certain limit, we should have a choice between two conclusions: we could give up Euclidean Geometry, or modify the laws of optics, and suppose that light is not rigorously propagated in a straight line. It is needless to add that every one would look upon this solution as the more advantageous"—and, as we shall see, the more logical.

And hence Mr. Russell is compelled to say, "It cannot be maintained that no premisses except those of Euclidean Geometry will yield observed results; but those which are permissible must closely approximate to the Euclidean premisses".[1]

In the second place, measurements tell us nothing about space itself. They only tell us about relations of bodies in space to one another. And this is significant. Let us see what it means.

Euclidean Geometry, as it stands, gives us certain definitions of straight lines, planes, and so on; we on our part take the things we draw as representative of, or as containing as ideal elements, the things defined. But it does not give us, at least not at first, any way of getting the entities exactly. Then later on, it gives us a method (the method of Peaucellier's cell) of drawing a straight line by a geometrical construction. But in this construction we must assume, first, that the geometrical properties of physical bodies are unaltered by mere motion, second, that we have a Euclidean plane on which to effect our construction. We might possibly have a similar method by means of which we could draw a plane by a geometrical construction. This would only involve the rigid fixing of a point, along with the assumption made above regarding motion. Then our entities would be completely specified, and we could compare the planes we ordinarily use, and the straight lines we ordinarily draw, with the plane and straight line got by our geometrical method. This seems to be the only logical method of testing our constructs.

The plane and straight line analogously obtained by means of Lobatchewsky's Geometry would be different. And the

[1] Russell, *op. cit.*, p. 442.

most careful measurements, if they could be conducted in this way, would only tell us whether what we had drawn was a straight line or plane of Euclid or of Lobatchewsky, and could tell us nothing of space itself. From this point of view the definitions, axioms, and postulates are all parts of the definition of the elements—of the constructions, that is, to be made *in space*—which are to form the subject-matter of the Geometry. They are not at all hypotheses regarding the nature of space. They do not say, "Let our space be of such a nature that ——" but "Let our *constructs* in space be of such a nature that ——". Hence there is not in this a question of different spaces, but of different elements in space. Pure Geometry is thus, not "a science of all the possible kinds of space," but a science of all the possible species of constructs in space. When we want space, it puts us off with a spatial determination. And, of course, we do not need anything more.

This point of view is borne out by the fact that propositions in one Geometry can be translated into any other Geometry. In other words, we can draw up a list of terms in the one Geometry corresponding to terms in another Geometry. Let us consider why. Let us take as a plane in one geometry, the surface of a very large sphere; in another, the surface of a very large ellipsoid. Define as a straight line, that which lies evenly between its extreme points. And define perpendicular, the various kinds of triangle, and so on, in the same way as in Euclid. Corresponding to the same definition, we shall have different lines in the two cases. The axioms and postulates, and hence the propositions, will be different. Is there any way of comparing the propositions arrived at in the two cases? Obviously if we can express the straight line, the right angle, etc., of the Ellipsoidal Geometry in terms of the elements of the Spherical Geometry —and we can do it by means of Analytical Geometry—then any proposition arrived at in the Ellipsoidal Geometry can immediately be expressed in the Spherical Geometry; and *vice versa*. And this is precisely the relation between the different systems of Geometry: they are systems dealing with different constructions, the elements being defined by definitions, axioms and postulates, and rendered more precise by the propositions derived therefrom.

The analogy between the different number-systems and the different Geometries should be noticed. The theory of number arose in practical needs, and gradually became a separate and ideal science. The system in general use is the decimal system; and the definitions and multiplication table

are laid down with reference to it. But there are very many other systems—the scale of seven, eight, nine, etc. The definitions and multiplication table in these are different. One branch of the theory of numbers lays down such theorems as the following: A number in the scale of ten is divisible by nine if the sum of its digits is. For each system there is a corresponding theorem. These theorems bear a close resemblance to the theorems of the various Geometries. Thus we have various numerical systems, with propositions peculiar to each. All the systems are alike applicable to things, considered quantitatively. But if it were suggested that we must have recourse to experiment to see which system applies to actual number as it exists, we should have to point out that experiment would tell us, for example, whether any given collection, described as 18 say could be so described in the decimal or in the nonary system, but nothing more. Number itself we cannot get. And so with the Geometries. The only thing we can attempt to discover is whether any given element in experience, described say as a straight line, can be so described in the Euclidean or in some other Geometry.

Our question, "How shall we choose which is the Geometry of *actual* space?" therefore takes the form, "How shall we see whether the constructs we ordinarily consider as straight lines, planes, circles, are Euclidean or non-Euclidean? Simple experiment, we have seen, cannot discriminate sufficiently. Hence the question turns on the choice of the simplest of those Geometries between which experiment is unable to distinguish. But there is one property which, Couturat points out, is a simple matter of intuition and common to all Geometries—the three dimensional character of space. Hence, he thinks, intuition and convenience (intellectual convenience) are the things which together enable us to select Euclidean Geometry as the most useful.

But let us connect this with the process by which experience is built up. All building up of experience takes place by a process of successive approximation. This is another aspect of the process we have described already, of the transformation of premisses. We cannot deal with a thing in its entirety; we are obliged to pick out one aspect of it and proceed as if that aspect were not affected by any other conditions. With reference to that we attempt to explain everything; gradually this attempt leads to the necessity for a reconstruction, a discovery of the limitations of our previous view, and the setting up of a more complex aspect as final.[1] It is for this reason that intuition, experi-

[1] *Cf.* Thomson and Tait, *Natural Philosophy*, vol. i., part ii., §§ 438-446.

ment, and convenience pick out the science most useful in experience; we choose the simplest because it is the only thing we could choose. Everything else presents a problem which can be solved only through the simple. The view of the complex of experience which can be grasped at first is of it as a simple complex, presenting problems; gradually this simple complex grows in complexity. Thus at first the idea was, Find out the numerical properties of things and you have the solution of your problem; this was expressed, Number is the real thing. Next, Find out the spatial properties of things and you have the solution; this was expressed, Space is what is real. And again, Find out the mechanical properties of things and you have the solution: this was expressed, Matter and motion are the real. Still again, Find out the teleological properties of things and you have the solution; this was expressed, Thought is what is real. All this had happened by the time of Plato; since then, each of these aspects has been gradually growing in complexity. Each is seen to be an aspect of experience merely, and to be included in the aspect next above it. Number has long since come to be considered as, in itself, an abstraction; it has long been seen that bare number does not form a part of experience. It is time the same step were taken with space. With matter and motion, even with thought, the same may be said. As abstract nouns merely, they are unreal; they are real and significant only as they are adjectives as well.

Within each aspect we have the same thing. Number at first was bound up in sensuous things; it was not seen to be an ideal element in experience. Later what represented number was the decimal system of notation; gradually other systems grew up. At present these are seen to be determinations of number according to various schemes. And in this penetrating through the sensuous element to the ideal element in number, the science of number is not thereby going away from experience, but coming the more closely to experience—for it is rendered more efficient as an instrument in the solution of problems. It is all the while growing in complexity—from the abacus to modern theory.

With space we have a similar development. Geometry is gradually breaking away from the fictitious object, space, which we are wont to picture; Euclidean Geometry is seen not to be the Geometry of a particular space or of our space, but the science of one of the systems of determinations of space. Other systems are seen to be possible, more complex, in a sense more remote from ordinary experience. But Geometry, as number, in becoming more general, in dealing

with the ideal element and ceasing to be bound up in the sensuous element, is thereby becoming more powerful as an instrument of attack, and is thus coming nearer to experience rather than going away from it. Pure space is, in itself, ideal, and apart from any determination in experience, unreal. In experience there is no such thing as pure space.

This I take to be the significance of the various Geometries —that they are showing space to be in most respects analogous to number. Thus what Prof. Bosanquet says of "the apparently independent reality of number," applies similarly to space. "Such a generalised scheme, though meaningless except as applied to a positive content of thought, contains nevertheless definite and necessary relations which are imposed by it on any content to which it is applied; and the presupposition that it is taken as applied to an adequate content fades into forgetfulness that it need be applied to a content at all."[1] But in pure number, and in pure space, as we have seen, there is not even any generalised scheme. They have no determination, and contain in themselves no principle of determination. Thus the idea of space as a "real individual object" being the idea of something which is empty and void of any power of self-concretion, falls into line with the empty "thing-in-itself". Space as an element in the thought-determination of experience—meaning thereby the various Geometries as applied to experience—is concrete, growing in complexity as it is applied; but corresponding to pure abstract space there is nothing in experience.

"Admitting, as we must admit for logical purposes," says Prof. Bosanquet,[2] "that space is to be reckoned with as having a peculiar actuality of its own, still it is not clear in what relation geometrical figures, apart from the shapes of actual objects, stand to actual space. Geometrical figures as such are not the shapes of actual objects; they are not identical with any perceptible figure; they are not distributed through space nor present as special characteristics in any portion of it. I do not know how to describe them better than as a peculiar class of *laws* or *attributes* of the spatial relation as such, which are concrete in the nature of their content, though abstract in their medium of presentation. And in the same way the characteristic totalities of number must be taken as laws—embodied laws—of the enumerative relation of part and whole."

"Actuality in sensuous presentation they cannot have. But we do not of course admit that Reality is restricted to

[1] Bosanquet, *Logic*, vol. i., p. 167. [2] *Ibid.*, p. 193.

sensuous presentation. All we can say is that in all relations of actual things these spatial attributes make themselves evident as controlling conditions, and are introduced as conceptions without which the mind fails to construe the phenomena."[1]

It is to be noticed that in none of this is there any attempt to answer the question in what relation geometrical figures stand to actual space. That is as difficult as the question in what relation numbers stand to actual number. It is a useless question, put in that form. Space, like the laws of nature, is an abstraction when considered apart by itself; it is not "writ in the sky" any more than they are. And yet apart from it, phenomena fall asunder into lawlessness. It has precisely the same kind of existence as they have—as an ideal element in the growth of organised experience. And it is *a priori* in the mind in the same way as they are; it is a "system of relations constituted by the mind in the process by which mere sensation becomes knowledge".[2] This is a denial of Kant's theory if to Kant be attributed the idea of an *a priori* perception which in no wise differs from the empirical; but it is in every sense the result to which Kant's philosophy pointed.

It now remains to consider in some detail the various positions held by believers in absolute space. Is there such a thing as absolute motion in space? The reply, of course, due to the conception of space above put forward, is, that there is not. Newton's argument, however, according to Mr. Russell, remains unanswered. I state it in his words. "If a bucket of water is rotated, the water will become concave and mount up the sides of the bucket. But if the bucket be left at rest in a rotating vessel, the water will remain level in spite of the relative rotation. Thus absolute motion is involved in the phenomenon in question."[3] Let us explain the difficulty.

(1) If there be nothing outside the bucket, rotation of the bucket becomes a meaningless term. The rotation of the bucket only has meaning with reference to things outside. But (2) rotation with reference to things outside does not affect the question at all.

The physicist is thus compelled to define and measure the rotation with reference to external things, and his solution of the problem depends on his measure of the rotation: and

[1] Bosanquet, *Logic*, vol. i., p. 195.
[2] Green, *Works*, vol. ii., p. 239.
[3] Russell, *op. cit.*, p. 490.

yet the rotation with reference to external things has no connexion with the problem.

This is a difficulty for the physicist who believes in relative motion. For the physicist who believes in absolute space the difficulty vanishes. For then the motion sought after is the motion with reference to absolute space, and it is this which enters into the problem. That this cannot be found does not affect the question, for it is that which is sought after. And the believer in relative motion has no such means of defining his motion.

The deep contradiction inherent in the idea of absolute motion will appear later; meantime there are other criticisms.

Will absolute space really help us to do anything more than *picture* the motion? Is our absolute space not really a putting aside of the difficulty rather than a solution of it? Mr. Russell is compelled to use the idea of absolute space consisting of points, which are all ideally separate and distinguishable. With reference to these points the body moves absolutely. Putting aside for a moment the question of the validity of this idea of space, let us ask if it will help us. Mr. Russell contends that the points are all ideally separate and distinguishable. But an absolute space of this nature is, by its want of determination, by its very idea, infinite, nor can we imagine it finite. (I refer here to the actual existent space: in any one of Mr. Russell's spaces, of course, the points could be numbered with reference to the process of constructing the space.) And hence there is no possibility of distinguishing the various points absolutely, but only relatively to one another. We should have to set up "imaginary axes" even in this space. And we are left with the result that our space is useless. For it is unable to help us to describe our absolute motion. And it is a significant fact that, when we come to consider the physicist's solution, we find no reference to absolute space. This will appear later.

The difficulty arises from the treatment of relative motion as if it were the only thing to be taken into account. The present attempt in Physics is to banish the idea, even the word, force, from the science, and to treat Physics as dealing wholly with motions and changes of motion. I think that Mr. Russell's insistence on Newton's paradox is valuable chiefly as showing the very great number of assumptions made by scientists when they speak of relative motion. The fact is, that when the physicist speaks of the motion of one body relatively to another,—for example the rotation of the water round the axis of the bucket—he is making a great

number of assumptions regarding the action of bodies on one another, assumptions which he has come to make in the gradual development of his science. And in the case of the bucket left at rest in a revolving vessel, we have not a case of relative motion in the physicist's sense. Dynamics deals with motions of bodies only in so far as they are due to, or affect, the motions of other bodies. Hence if dynamics discovered that, while B moved round A, yet B's motion was unaltered by any change in A, it would conclude that to say that B moved round A was an incomplete description of B's motion; that it was a statement which dynamics had to consider, but that the further description of the motion was the important thing.

And here is the solution of the difficulty. The difficulty arises from thinking that *any* relative motion will serve completely for the purposes of dynamics; and, on finding one which will not serve completely, arguing that therefore none will, and that we must seek absolute motion. The difficulty of selecting the appropriate relative motion is very great; in some cases it takes years—and a Copernicus; in some cases a good student may puzzle for an hour or so. But the chief thing is to select the appropriate relative motion—since anything more we cannot get, and anything more would not help us. This selection is of the nature of a hypothesis—we choose the motion which will best help us to co-ordinate the facts.

And now arises a difficulty. Suppose our earth were clouded over always, so that we saw no change in the sky; and in time, physicists were compelled, by various experiments, to conclude that the earth turned on its axis; would they not be compelled to believe in absolute space? That they would have to suppose imaginary axes set up in space in order to represent to themselves the motion, is certain; but would this prove that an absolute space existed? I confess to a want of faith in my opinion on this point; I have dubious leanings to the idea that the motion would become conceivable in course of time, without reference to anything beyond the earth; that people on the circumference would conceive themselves *looking towards the axis*, and changing their position relatively to it, considered fixed. If the Universe were a finite mass with nothing (absolute nothing) outside it, I am dubious as to whether rotatory motion of it would have any meaning—I rather think not: but I am as dubious whether it would mean anything if there were space instead of nothing (whatever that may mean). In fact, I can see no difference between the two cases.

And I am at liberty to contend that, if a motion is meaning-

less, it does not exist; and the necessity for altering that conclusion is, to say the least, a very remote contingency.

The physicist's point of view is, I think, admirably summed up by Poincaré.[1] "As a matter of fact the difficulty is artificial. Provided that the future indications of our instruments can only depend on the indications which they have given us, or that they might have formerly given us, such is all we want, and with these conditions we may rest satisfied." And we might go on to say, that all Mathematics is constantly dealing with things which are purely imaginary, if considered in themselves—fractions, negative and complex numbers, and even, perhaps, axes in space.

For the last few pages our curiosity has been growing—as to what Mr. Russell's theory of space really is. We therefore proceed to discuss it. Space consists of points. It is an aggregate of points, and is defined in terms of points. Different spaces are built up as follows: We begin with two, three or four points, which are indefinable; and then, laying down certain definitions and axioms as regards the relations holding between them—these relations are arbitrary, a matter of choice—we proceed to put in more points, and so gradually build up our space. For instance, beginning with two points between which we assert certain relations to hold, we might lay down as an axiom that there is a point which has certain other relations to any two points in the space. This would give us a new point; this new point with each of the others would give, by means of the axiom, a further point—five in all; and our axiom (with new axioms on occasion to ensure our process continuing) would enable us to put in a great number of points. And as we proceeded, we could lay down other axioms which would enable us to put in an infinite number of points, arranged in orderly fashion. Thus a space is defined wholly with reference to the manner in which it is built up out of points; these points are indefinables, and the relations holding between them are independent of the points. "Space is nothing but the extension of the concept point, as the British Army is the extension of the concept British Soldier; only, since the number of points is infinite, Geometry is unable to imitate the army list by the issue of a space list."[2] These points are self-existent, independently of all other points. A point does not owe its being to the fact that it is related to other points. Its relation to other points is a thing external to it altogether; nay, its relation to other points presupposes that it has being independently of that re-

[1] Poincaré, *op. cit.*, p. 122. [2] Russell, p. 443.

lation. "Its being is simply its being."[1] It is distinguishable from all other points quite apart from its relations to other points; that we do not think so is simply due to the imperfection of our senses and memory—we have as it were a bad memory for faces. Hence absolute position in space is quite determinate.

Space in this sense is not a simply ideal thing, existing in the mind; "both being and existence belong to empty space".[2] Everything has being, as a creation of the imagination or as something else; but not everything has existence.

Thus Mr. Russell seems to hold space to be a sort of squared paper ready prepared, on which to draw diagrams. Each square is a square quite independently (we may say) of all the other squares; and the whole paper *is* independently of anything we may draw on it. Thus things will be in space and move with reference to it in a similar way to the way in which diagrams are drawn on the squared paper. There are two quite separate entities, empty space, in which things are, and in reference to which their position is plotted out, and things, which are in it.

I have already, from general considerations, criticised the attribution of existence to a general scheme of this nature; and shall not at present do more than outline a criticism of the theory itself.

In the first place, the points cannot be given any individuality such as Mr. Russell suggests. They are indefinables, and apart from their relations to other points, must remain indefinables. And in an infinite space, their absolute position cannot be fixed either.

In the second place, if we ask *what* being the points have independently of the relations they bear to the other points, we cannot get any reply.

Lastly, if the relations are external relations, what is the sense of predicating them of the terms?

Mr. Russell's position depends on the philosophical theory he holds along with Mr. G. E. Moore; which holds the "non-existential nature of propositions (except such as assert existence) and their independence of any knowing mind; also the pluralism which regards the world, both that of existents and of entities, as composed of an infinite number of mutually independent entities with relations that are ultimate, and not reducible to adjectives of the terms or of the whole which they compose".[3] I shall not discuss it; Mr. Bradley has done that very fully;[4] it will be enough to account for it.

[1] P. 453. [2] P. 449. [3] Russell, *op. cit.*, Preface, p. vii.
[4] *Appearance and Reality*, pp. 574-582.

This theory is the result of a defect in Green's theory of relations. Reality, according to Green, consists of relations; Green tears all terms into relations. It is true, that when we analyse the terms we find only relations—as when we look at the body we see only the limbs; but an object is something more than mere relations—as the body is more than mere limbs. Take away the relations and you take away the object. Yes, but try to take away *only* the relations. You are taking the terms as well. Try to get the relations without the terms. You cannot. All this only shows that terms-in-relation form a system, a unity in which the relations depend on the terms, the terms on the relation, the terms-in-relation on both, and both on the terms-in-relation.

But suppose we refuse to accept a Hegelian "organic unity" a "triple syllogism". Then if we keep to the dependence of terms on relations there is nothing for it but to resolve the terms wholly into relations. And in the natural course of events the relations themselves are seen to be inadequate; there must be terms between which the relation holds; and these terms, not having any intrinsic connexion with the relation, must exist independently of the relation, and co-eternally with it. Thus the world, which was considered as consisting wholly of relations, comes to be considered as "composed of an infinite number of mutually independent entities, with relations that are ultimate, and not reducible to adjectives of their terms or of the whole which they compose". Or the position may be reached directly, by way of revolt. If we make the terms dependent at all on the relations we cannot prevent them being swamped in the relations. The only way of preserving the terms is to adhere strictly to their independence. Hence we have terms, on the one hand, and relations independent of the terms, on the other.

The whole problem is a result of the attempt to get the ultimate meaning of "terms-in-relation" by simple analysis, without any further process. A whole is *not* simply its parts; there is very much more in it than this, and it is this more which a simple analysis misses.

I hinted at a deep contradiction involved in the conception of absolute motion as used by Mr. Russell. I have now to attempt to show what it is.

Mr. Russell's theory bears traces of a materialistic view of space. Newton's view was frankly materialistic. Space reacted in some way with matter. And there have been many similar views of space put forward. The most original in

this way is Clifford's imaginative theory of various spaces. I give it chiefly as illustrating an extreme form (logically) of the theory of absolute space. Starting with Clerk Maxwell's pronouncement[1] that "Any one who will try to imagine the state of a mind conscious of knowing the absolute position of a point will ever after be content with our relative knowledge," Clifford goes on to consider the possibility of absolute position in space, and of finite spaces of various dimensions. As typical of a one-dimensional space he takes the case of a worm in a tube; the space will be considered homogeneous if the tube be in the form of a circle, and infinite if there is no mark on the tube which the worm can recognise. If there is such a mark, the space will be recognised as finite, and absolute position can be fixed. If the tube be pear-shaped, the absolute position can be fixed by the amount of bending experienced by the worm. Here we have a finite space in which absolute position is recognised. Clifford however remarks that the physical bending of the worm would probably be attributed to other causes than the bending of space; in that case, space would be homogeneous and infinite, and there would again be merely relative position.

The case of two dimensions is considered analogously. When we come to our own space we have several possibilities, formulated by Clifford as follows:—

(i.) Our space may have a curvature varying from point to point. Absolute position in space would then be conceivable.

(ii.) Space curvature may be constant throughout space, but may vary with time.

(iii.) Our space may have nearly uniform curvature, slight variations occurring from point to point, and also with time. These variations might produce physical effects, analogous to the bending of the worm. We might even go so far, Clifford thinks, as to assign to this variation in the curvature of space, "what really happens in the phenomenon which we term the motion of matter". And Karl Pearson suggests in a note, that the phenomena which might thus be explained are those of light, heat and electro-magnetism. "It is a question," he says, "whether the physicists might not find it simpler to assume that space is capable of a varying curvature, and of a resistance to that variation, than to suppose the existence of a subtle medium pervading an invariable homaloidal space."[2]

[1] Clifford, *Common Sense of the Exact Sciences*, p. 215.
[2] *Ibid.*, p. 226, note.

In reality, Clifford is not considering various spaces at all. He is considering the action of various constraining bodies. The corresponding analogy in the three-dimensional space is of a three-dimensional world constrained by three other three-dimensional worlds, one on each side. Or rather, there is no real analogy at all. In reality, we are using three-dimensional matter all the time. The moment we seriously attempt to conceive of anything else, we fail. So long as we are working with a flat fish confined between two surfaces or with a tube—*i.e.*, with three dimensions—we can understand what we are doing; but then if we imagine the constraining *matter* to be taken away and try to think of a two-dimensional fish in a two-dimensional space as anything more than ideal, we find ourselves unable to do so.

That space should be considered to have a constraining action on bodies, even to be capable of explaining physical phenomena, by men such as Clifford and Pearson, is due to their education in Newtonian ideas. Newton's first law of motion is indeed stated in such a way as to render such interaction necessary; and such interaction is a logical outcome of Mr. Russell's absolute theory. For otherwise, why should it be necessary to find the motion of a body with reference to absolute space, as Mr. Russell considers it to be?

The difficulty raised by Newton's law was a very real one in the time when Clifford wrote; and it is only being made more remote by the work of modern physicists. If the theory expounded by Prof. J. J. Thomson, explaining matter in terms of electricity, and thus connecting matter definitely with the ether, should prove to be well founded (and it may be said to be so already) then the difficulty disappears. For then what we have in the First Law is not the motion of matter with respect to absolute space, but with respect to the ether. Whatever the ether is, it is a scientific hypothesis, which is sufficient to warrant its use in this question, philosophically. And if matter is a "centre of strain" or a "discontinuity" in the ether, then to say that "Every body continues in its state of rest or of uniform motion in a straight line (relatively to the ether) except in so far as it is compelled," etc., is to lay down a proposition which, though certainly ideal—for the case could not be realised—is not necessarily unexplainable. For there is a real connexion suggested between the state of motion relatively to the ether and its change of state, which may be significant if matter is fundamentally ether, but which cannot be if there is no possibility of interaction between matter and ether.

And if for "ether" we substitute "absolute space," we must consider absolute space as interacting with matter.

Thus from the argument regarding absolute motion in space, we see that if we are to hold seriously to absolute space, and if it is to be of any value to us, we must consider it as in some way interacting with the matter in it. And then we are fairly on our way to a materialistic view of space, such as that of Clifford. This result—that if we hold to the existence of pure empty space independently of matter. we are compelled to attribute to it the property of interacting with matter, and so make it contradict itself—shows that as empty space it is a mere abstraction. Thus from this side we have the same result as before

## III.—THE PRINCIPLE OF CAUSALITY IN ITALIAN SCIENTIFIC PHILOSOPHY.[1]

By Angelo Crespi.

### I.

The following considerations have been suggested by several assertions we have seen concerning Herbert Spencer's place in the history of the genesis of a scientific interpretation of the world. Thoroughly conscious that the importance for that interpretation of the English psychology of the eighteenth and nineteenth centuries cannot be exaggerated, we endeavour to show that Spencer's solution of the problem of causality and of the uniformity of natural laws not only does not bear the weight of a severe criticism, but represents a step backwards in regard to the method followed by the traditional tendency which had its chief interpreters in David Hume and John Stuart Mill. Moreover, we think that those authors failed to reach the true solution, not because of any insufficiency inherent in their rigidly experimental method excluding every *apriorism*, but solely because of insufficient application of the method itself, and of an insufficiently deep analysis; so that, implicitly, we assume that the objective value of the principle of causality can be shown by experience to be inherent in the real in itself, and not to be the mere result of rational deductions or of inductive reasonings. This assertion indeed constitutes one of the most peculiar marks of the present Italian scientific philosophy, the most authoritative apostle of which, Robert Ardigò, Professor of the History of Philosophy in the Royal University of Padua, really deserves, according to many whose opinion is of weight, to be considered as a powerful and respectable competitor to Herbert Spencer. And this

[1] Since this article was written, a long time ago, some alterations happened in the writer's degree of adhesion to the chief points of Prof. Ardigò's philosophy; but the article has been left untouched because, after all, the historical significance of the theory of causality developed through it remains, and though in need of further developments and of some substantial change, its fruit-bearing character remains as well.—The Author.

not only because of his wide systematic views concerning every class of phenomena, but especially because of the deep originality of his principles; so that Ardigò appears at the same time as the only thinker wholly true to the empiric method who, notwithstanding, has a rational cosmology, and as the only thinker who has the clear idea of the naturalness of every bond between phenomena.

Every cosmological conception is invariably conditioned by the conception a thinker has about the value of human understanding. That is one of the clearest lessons from the history of philosophy.

Therefore, let us shortly recall the terms of the question and those of his solution.

It is well known that, according to David Hume's theory, from which that of John Stuart Mill does not substantially differ, our knowledge is essentially nothing else than a classification of sensitive perceptions according to their relations of likeness and unlikeness, of co-existence and succession. The processus of this classification is that of Association. Our knowledge, in consequence, being only a co-ordination of subjective perceptions, we are not warranted in dogmatising about objective existence, and every "necessary" belief is based only upon custom. The mind fails to detect any nexus whatever between phenomena. Starting with this conception of our knowledge, the only possible view of the world consistent with it, was that of an aggregate of facts existing by no inherent necessity and resting upon the arbitrary. Spencer's position is less far from this point of view than might at first be supposed.

Indeed in the *First Principles*, as well as in the *Principles of Psychology*, or in the 660th section of the *Principles of Sociology*, he expresses the quite clear conviction that the *nexus* between the different phenomena, however certain, belongs to the sphere of the Unknowable. So that in the last analysis we remain with a sceptical conclusion. It is true that, following Hamilton, he tried to show the uniformity of nature and the law of causation to be a mental necessity, an aspect of the persistence of force, that is to say, a corollary of our being unable to conceive a fact as issuing from or as passing into nothingness. But it seems to us that this solution is not tenable. Historically, the asserted "inability to conceive" is in contradiction with many beliefs in which a total or a partial misknowledge of causality was implicit; and in any case, this principle is only a final conclusion, never a starting-point; it may express the supreme generalisation of science, not in the least its support and foundation. This point of

view leaves quite unanswered the chief problem: What is the objective range of the idea of cause? What is the ultimate reason of our belief in the principle of causality? It appears clearly at first that if we never detect any nexus between facts, no succession of facts, however often repeated through millions of annual and human generations, could in the least suggest the idea of such a nexus. Why do we project our volitional experience as causative beings in certain cases and not in others, or, to speak more exactly, why in many cases do we not desist from projecting this experience into external changes and in many others cease doing so? It seems to us that only Ardigò's epistemology answers quite satisfactorily all these problems, or, at least, contains the secret of the answer, and only upon his answer to these points can a rational cosmology be legitimately built. We shall shortly summarise his guiding gnoseological ideas, chiefly contained in *Empirismo e Scienza*, in *Il Vero*, in *La formazione naturale nel fatto del Sistema Solare*, and in two works concerning the *Unknowable* of Herbert Spencer and the *Noumenon* of Kant.

## II.

Just as the observation of the fact of light is sufficient to authorise us to affirm as absolutely real the existence of light, so the observation of any psychical fact is sufficient for the affirmation of such a fact as absolutely real; that is to say, as a *datum* not at all relative to any other reality, and not in the least suggesting the thought of any reality beyond that which constitutes its own being, not even that of the Self or of the Not-Self. So that, quite rightly, Condillac asserted that, on the hypothesis that a marble statue could suddenly become conscious of the perfume of a rose, the consciousness of that statue would only be constituted by the sensation of that perfume, not in the least referred to any subject or object. Prof. Ardigò expresses this by saying that every element of our experience and our experience itself as a whole, is not in the least relative, but, on the contrary, is absolutely true, and that the relativity only concerns the further differentiated parts of our experience, just as, *e.g.*, a circumference is in itself an absolutely real entity, and relativity can be found only between its geometrical elements. Therefore the law of association has, in the Italian philosopher's conception, a quite different reach from that given to it in the traditional English psychology; for such a law is not asked to give us more than it may find in the content of the *data* and in

the relations between these *data*, on which it is working, and, in consequence, not even the causative nexus, if this is not given as a *datum* of experience. If we are well convinced that every sensation possesses in itself an absolute truth, that truth, because of which it is that especial fact and not another, or the image of any other; that is to say, if we are well convinced that every sensation in itself is a bit of absolute reality, having a value, because of this very fact of its existence, quite preceding and superior to any other value, which it will get afterwards, as entering into relations with other *data* or groups of *data*, we shall very easily understand that through the different ways of association we do not create any truth or constitutive principle of our understanding, but only discover those truths and those laws of the reality which are given in the elementary *data* or in those groups of these data which are, as such, given by immediate experience. Before approaching more intimately our especial question, it will be well to elucidate this point. Just as the anvil and the hammer are made of the same matter and only differ because of their mutual relations, so the Self and the Not-Self differ only because of the new mutual relations between the same elements of which both are constituted. The same perception, indeed, according to the different cases, may appear as belonging to the subject or to the object. But, just because every elementary datum is a real in itself not yet classified as belonging to any subjective or objective world, and as this reality is presupposed in every further classification according to Prof. Ardigò's views, we are not at all authorised in saying, as subjective idealism does, that subjective reality, the psychological world, has in itself a more immediate and deeper reality than the objective world, which has only a derived and symbolical value.

Indeed, this assertion forgets that the classification of a perception or of any representation, as a part of the psychological world, is only possible after the differentiation of experience in the two aspects of the Self and of the Not-Self, that is to say, that that perception is not in itself a psychical or physical phenomenon, but comes to belong to one of these classes only through its being distinguished by us as such, after that differentiation. Therefore the reality of the subjective and objective world is exactly of the same degree; both are two branches from the same stem, two sides of the same processus of polarisation of the experience as a whole. The real is not conceived through the subject, but it is given in the subject as well as in the object, or, more exactly, being given in itself, it gives its own reality to make the second-

hand reality of the Self and of the Not-Self through a correlative processus of differentiation.

So that the reason of the affirmation of the reality of the subjective and of the objective world, is nothing else but the reality of their elements, their existence as a last datum of experience, imposing itself quite independently of every other reality with which, only afterwards, relations may arise. The new derived realities are only a continuation of the formerly given reality of the pure undifferentiated experience, which, in being differentiated did not in the least degree imply disruption. The fact itself of the correlation between the subjective and the objective world means that both are radically joined by the identical nature of their unities.

If we have fully grasped this fact that the differentiation of the experience, which is the development of the real, does not split and destroy the primordial unity of the real itself, which still is underlying both Self and Not-Self as their constitutive elements, just as the differentiation of the primordial nebula in the several elements of the actual solar system did not break and suppress their fundamental unity which still remains, we shall be enabled to discern the absurdity of the problem of casuality in its traditional form. The absurdity lies in the proposal to discover what value the merely subjective principle of casuality may have for the interpretation of an external world supposed to be quite inaccessible to us in the unity of its being. And at the same time we shall be warranted in attributing to it an absolute value, whether in the subjective or in the objective sphere, if we shall find the causative nexus in those *data* of experience, which constitute the common root of both subject and object.

## III.

Why does every ordinary man believe that the elevation of the eyelids is the cause of the visual sensation? Only because of this: that the experience gives to him both as one fact, the unity of which as a whole is to him empirically certain. This becomes plain when we consider that another man, *e.g.*, a physiologist, detects several moments in the same fact of vision, wherein the ignorant discern only two moments, and what is the progress of science but a continuous discovery of many facts where formerly only one was perceived? These remarks lead us to acknowledge another deficiency of English doctrines of causality. They apply association to explain the belief in necessary causative nexus, but they consider the *fact-cause* and the *fact-effect* as being

connected through association, though in themselves they are without discernible connexion. The truth is just the contrary. It is not through association that they are connected; *they are given us already connected in observation.* The point missed by the English psychologists was just this, that, although through abstraction we can separate the several moments of a causal process, yet it is only when they appear as moments of one fact, like points of one continuous line, that we are compelled to believe in the existence of a causal nexus. Many examples may be adduced to explain and justify our assertion of continuity between the several moments of one fact. When any one is making microscopical researches, he begins by examining his object under a low magnifying power. In this way he gets the knowledge or the representation of that object as a whole. When afterwards he looks at the same object under a greater magnifying power, he discovers several details; but his understanding of these details is only possible through the prior representation of the object as a whole. This representation plays, so to say, the *rôle* of a background in a painting, and makes visible the unity of apperception, whereby every detail is apprehended as connected with the others and as a constitutive element of the one object. The same happens in the progressive knowledge of a mountain. Ignorant and learned men begin by having the indefinite representation of an immense mass of stones. But little by little one discovers several aspects ignored by the others, one sees distinctly where others still see indistinctly; but for him also the new discernments have a meaning only through the place they take as referred to the previous indistinct representation of the mountain as a whole, which is the reason of our persistent belief in the connexion of the discovered details. They are still thought as belonging to that mountain, and in certain mutual relations, because we discerned them within the whole of that mountain and subject to those relations. Knowledge is always passing from the indistinct to the distinct, the connexions of the distinct parts being explained by the persistent unity of the underlying indistinct. It is the same with regard to the causal nexus. No fact or thing is so simple that it cannot be conceived or shown to be the result of smaller elements, and no fact or thing is so constituted that it cannot be conceived or shown to be part of an including system. Therefore if one fact is carefully studied and several moments are distinctly perceived in its development, the connexion between these several moments will be given by the representation of the

fact as a whole, within which they have been apperceived; and, again and for ever, as every one of these moments can be found to be the succession of several smaller fractions of time, so the representation of each moment as a whole will again be cause of the affirmed existing connexion between the several smaller phases of its becoming. And the opposite process also takes place. Several facts hitherto quite disconnected cannot but be thought as in necessary causal connexion, when given by experience as moments of an unexpected continuous line. The mistake of the English psychologists in their theory of causality has been that of considering only the distinct points of the lines and of neglecting the continuity between them, continuity which is not less real because of its being indistinct. They acted like a hypothetical geologist who should regard each of the several beds he discovered in a sedimentary deposit in complete isolation from the rest. The representation of the deposit as a real whole is just the reason because of which every geologist, although continually distinguishing new moments in its history, considers the successive layers as constitutive parts of it. And why? Only because their subordinate reality is by experience given him together with a greater and including reality. The latter is not less real than the former, and, again, between one stratum and another and within each one, there are many quite ignored phases; but they are included in the whole; its indistinct reality fills the emptiness of the distinct knowledge. Far from seeing every thing or fact as always disconnected, we always see everything as a part of something else and including something else.

## IV.

Therefore causation is inherent in experience to the real in itself, independently of its further differentiation in Self and in Not-Self. What wonder that causal relations may be found in these two derived sides of the same real and between them also! Indeed the differentiation left quite untouched the absolute reality of their elements. So to say through that differentiation, the causality itself appeared here as subjective and there as objective; but in both the reasons of its being affirmed were the same. So long as we fail to see that the Self and the Not-Self, the internal and the external world are nothing else than differentiations of the same real, the problem of their mutual relations is bound to appear as for ever insoluble. But for those who succeed in seeing that both are included in an absolutely given and

indifferentiated psycho-physical reality, the continuity of which is still underlying them, the problem of their causation is quite like any other: not harder, not easier. Just as the representation of the fact of sight, as a whole, gives the connexion between the several causative moments successively discovered within it by science, in the same way the representation of the real in itself, independently of every further elaborated differentiation, gives us, in its unity and sameness, the connexion of the two derived worlds of the subject and of the object. To explain is nothing but to find and recognise the indistinct unity of which the fact to be explained is an element. Experience gives the real in its unity; analysis distinguishes and distinctly catches the several sides of the real; the task of philosophy is the same task of understanding, that is to say, the reconstitution of the total representation of the real as one whole through a process of recognition of every distinct as a part of an including indistinct, up to that indistinct which, in every stage of the knowledge, is such because in that stage it could not be further distinguished, and which is the supreme general scheme justifying the affirmed unity of all the subordinate distincts. Just as every further distinction of points in a continuous line never suppresses the continuity of the line between the several points and the possibility of further distinctions, so that the continuity of the line gives the explanation of the relation between those points, so every further distinction in the knowledge of every phenomenon or of the universe as a whole, will never suppress the continuity of the indistinct part between phenomena, which is the reason of their unity, whether the reference be to the infinitely great or to the infinitely small. In this way the world is no more, as in Hume, John Stuart Mill and, implicitly, in Spencer's doctrines, a mere collection of fact, only joined by the mental process of association, but appears as one fact, nay, as *the* only real fact, of which we distinctly catch only several moments following each other in that general form of sequence we recognise as causality. In this way once more epistemology is shown to be in intimate connexion with cosmology; no induction from millions and millions of experiences of human and animal generations, no deduction from any so-called ultimate postulate of thought, is wanted in such a cosmology as a condition of its possibility; the fact is sufficient. For a cosmology reaching the point of its ideal perfection, the only possible task would be that of giving a representation of the real in which the greatest variety of the world considered from a dynamic point of

view would look identical with its deepest sameness, from a static one; *viz.*, its task would be that of representing the unity of Being. The uniformity of natural laws, instead of being a mysterious instinct or a deductive corollary, would only be the expression of the unfailing and everlasting identity of the real with itself, of the real, which cannot be unreal. This, shortly, is the philosophy of causality in Prof. Ardigò's epistemological and cosmological conception, and it seems to us to be a great step towards the traditional aim of English experimental philosophy, the exclusion of the *apriori* from the science of human knowledge. As we said in the first paragraph of this essay, it may be clearly seen that, while one spirit and one method, although applied with different degrees of exactness and depth, inspires the doctrines of David Hume, John Stuart Mill, and Robert Ardigò, that is to say, the rigid *aposteriorism*, there is on the contrary a profound difference between the Italian thinker and Herbert Spencer, with regard to method as well as with regard to results, which in the latter are undoubtedly sceptical, if we consider his own last views concerning the value of his doctrine of the Unknowable. If we consider that Prof. Ardigò is the only Italian thinker who now has a real systematic body of doctrines and that his theory of *Natural Formation* is the only work which aims at the same goal as the *First Principles* of Spencer, though with deeper penetration, the hope that his philosophy may become the object of some consideration in England will not be judged as a temerarious one, especially if we shall add that he is at the same time the most authoritative interpreter of that innate tendency of the Latin spirit, which gave to the world the genial naturalistic intuitions of Giordano Bruno and the experimentalism of Galileo.

## IV.—JUDGMENT AND APPREHENSION.

By Helen Wodehouse.

In the following pages I wish to set forth such arguments as most appeal to me in support of the thesis that judgment and apprehension are identical, and to examine certain arguments which have been advanced by high authority on the other side.

Those who have opposed the current division between judgment and apprehension have usually done so by means of levelling up. They have protested that the activity of thought is everywhere, that the lowest step and the most elementary element in knowledge must still be classed as judgment. This line of argument, though a good one, might be usefully supplemented by the opposite plan of apparently levelling down. The division, it may be urged, disappears so soon as we remove from judgment the shadow of a mysteriousness and complication which it really does not possess. We may try to show, not that apprehension is itself judgment, but that *judgment itself is no more than apprehension.*

Take a simple case. Suppose six dots on a piece of paper, : : :, to be placed before the eyes of an intelligent man. He sees them in the full sense; sees into them, sees many of their relations, though very likely he puts nothing into words. Invited to speak, he says, "Very well, there are six dots, or two groups of three, or three groups of two; what next?"

Now at what point in this process did judgment supervene upon simple apprehension? Not, surely, just where the perception of number and relation came in, for to say this would be to make apprehension merely another name for sensation. Not, surely, just at the higher point where *words* are first used, for to say this would be to deny all judgment to an animal, and to attribute it in an altogether disproportionate excess to people who use verbal imagery as opposed to those who chiefly use other kinds. Is not the process homogeneous all along? a gradually developing cognition which may, if we like, be called judgment from the beginning,

but which may equally well be called apprehension up to the end?

But here the most important advocates of a division will reply, "In this special case judgment and apprehension were present side by side throughout. For *belief* in the reality of the thing apprehended was always present. Judgment exists wherever this belief exists; where there is not belief we have apprehension alone." The answer to this is, (1) that there are various universes of reality, (2) that, this being granted, belief in the reality of what is apprehended is indistinguishable from the apprehension itself. The *cognitive* process is precisely the same whatever universe is in question, whether it be one of those roughly classed as "actual," or whether it be one of those roughly classed as "imaginary".

Let us take a transitional case, where, instead of having six dots made for him on the paper by somebody else, the man makes them for himself and then looks at them. Here an act of creation by himself has preceded the cognition, but the cognition itself is precisely the same as in the first case. Next let us alter the universe a little; let the man not make the dots with pen and ink, but image them. An act of creation has again preceded the cognising, but he has created a different kind of reality. On the other hand, I maintain that the cognition itself is, in every relevant way, unaltered. He apprehends the imaged dots exactly as he apprehended those which he made on paper. It is no addition to say that he believes in them, or apprehends them as real. They have a different sort of reality; he sees them to be images and not marks on an actual paper, but they are real images. There is nothing here to make us say that when he used ink there was belief and therefore judgment, but that without ink there is only apprehension.

Let us take one more step. Nothing relevant is altered when the object has a sort of reality which is not adequately presented in sense or in sense-imagery. Let the man contemplate and examine the relation of 3 and 6 in general, or of 3003 and 617 in general. Let him follow a discourse on art "with an assenting mind". Let him contemplate his own character or a friend's, or a person's in fiction, created either by himself or another. Everywhere he is apprehending a thing, and it is no addition to this to say that he apprehends it as real, with its own special sort of reality. The objects are real number-relations, real laws of æsthetics, real personages in a book. The reality in some cases is due to acts of creation by himself, but the cognition of what is created is just as submissive, just as objective, just as believing in every case.

Our position is, then, that if judgment exists in any case of apprehension it exists everywhere. Or, to keep to our plan of apparent levelling-down, we will say that, since judgment means apprehension *plus* belief, and since apprehension without belief is as inconceivable as sight without seeing, therefore all judgment is simply apprehension. "I apprehend that . . ." is used in ordinary language in exactly the same sense as "I judge that . . . "; and the typical expression of assent is " Yes, I see ".

It may, however, be said that the kind of reality we call actualness is so important that the apprehension of an actual thing as actual ought to receive a different name from any other sort of apprehension. It is judgment if you say "I upset the milk"; it is not judgment to say " The March Hare had upset the milk". I can only say that I see no reason for altering the name. The cognitive process in the two cases seems to be precisely the same, even for Lewis Carroll himself. Lewis Carroll in each case will be contemplating a creation of his own. They are creations in different worlds, which he will not confuse; he will see each as possessing its own special sort of reality. And no doubt he has rather a freer hand in creating in one of the worlds; he could do no more than pick up his own milk-jug, whereas if he chose to alter the story he could make the March Hare's to have never been upset at all. Yet so long as he does not make this change his judgment must be just as submissive in the one world as in the other; the fact of the overturned cup is as solid as any other fact, and bears as hard on all action in its own world — nobody must treat that jug as upright and full. The cognition is in every relevant way the same as cognition of a creation in the "actual" world. If that is the apprehension which is one with judgment, so is this too.

One final objection may be brought; it may be said that the *discrimination* of different universes of reality is so special and important a process that it ought to receive the special name of judgment as distinct from the ordinary apprehension. I should reply that this is possible but rather dangerous, because it suggests that the process of presentation here is different from the ordinary. I urge that this process is exactly the same, whether I am cognising a broken cup as existing in my drawing-room, in Queen Anne's drawing-room, or in Wonderland, or whether I am cognising it as broken in two and not in three.

I will now examine a few features in one of the most careful and important attempts to divide judgment from appre-

hension, that of Dr. Stout. Let us take first the treatment in *Analytic Psychology*, vol. i., pp. 99-114 (2nd edition). Dr. Stout bases his position on that of Brentano, but he gives so full and accurate an account of Brentano's arguments that I feel justified in saving trouble by confining my references to the English book. The main test cases proposed (p. 100) are "(1) The state of doubt or suspense of judgment; (2) The play of fancy or 'make-believe'; (3) Æsthetic contemplation without make-believe or with a minimum of make-believe".

(1) In doubt, according to the author (p. 103) "judgment is present in a most defective, and, so to speak, attenuated form, whereas the thought which it presupposes may be quite clear and definite. There need be no vagueness or indeterminateness in the simple apprehension of the alternatives."—According to my own account, this clear part is the apprehension, or the judgment, that "A must be $x$ or $y$". This is solid and distinct, whereas the tendency to improve and refine it may be weak, and the secondary apprehensions or judgments "one *or* the other, not both" and "evidence for $x$ is this, for $y$ that," may be so feeble that they create hardly any disturbance at all. The case is not one of a strong apprehension contrasted with a weak judgment, but of a strong apprehension-or-judgment contrasted with weak ones.

(2) In make-believe, Dr. Stout says, "the absence of disbelief seems . . . to depend on the voluntary exclusion of the question of truth or falsehood. . . . The moment that the question of whether or not the things we are thinking of exist is in any way brought before our minds, we unhesitatingly deny their existence." Yet "our idea of these feigned existences may be in the highest degree vivid and distinct". Therefore we have here a case of clear apprehension without belief, or with a minimum of belief; and therefore with a minimum of judgment.

It seems to me that this objection disappears so soon as we distinguish universes of reality, and so soon as we refuse to attribute any exaggerated importance *for cognition* to that universe which we call "actual". The phrase "to believe in" is no doubt most often used within the "actual" universe, and Dr. Stout seems to take it as properly confined to that universe, and extended to a work of imagination only so far as illusion, which is confusion of universes, comes in (p. 104). In my view the process of cognition is so exactly the same in all universes that it would be very awkward to attach importance to such a limitation. **Take**

belief rather to indicate essentially the *submissiveness* of all apprehension; the phrase "make-believe" is then quite accurate and quite independent of illusion. For our apprehension must submit not only to what is found but to what is deliberately created, by ourselves or by others and by hands or by head. In all these cases the submission is the same, and the apprehension, the belief, and the judgment are the same. We cognise the Mad Tea-party, then, just as we cognise a tea-party in actual life; and there is not the least need for us to confuse the universes in order to give the apprehension that submissiveness which makes it judgment, and without which apprehension could not exist.

(3) In æsthetic contemplation (p. 107) "a person listening to a piece of music, and giving himself wholly up to the enjoyment of it, apprehends the several notes, their time-sequence, and their other relations. But he does not frame judgments, either verbal or purely mental, concerning these matters. He is simply aware of them, and enjoys them. His mental posture is suddenly and strikingly altered if a false note occurs. The mood of æsthetic contemplation for the moment disappears, and he passes a judgment on what he hears."

This is an interesting objection from my point of view, because it is more readily met by levelling down than by levelling up. It would involve unusual language, though true psychology (according to me), to claim that the perception of the notes and their relations was already judgment. But just the same thing may be expressed in a more ordinary-sounding way if we claim that what is occasioned by the discord is still simply apprehension. The listener apprehends the notes as sounds in relation, as before; he now apprehends them also as bad sounds in discordant relation. Why is this to be given a new name? why is this judgment if the other was not? The man may not even use any words; but if he does, are words so important as to make all this difference? It is surely legal and not logical associations which lead common language to introduce just here the phrase "to pass judgment".

Dr. Stout next adds some special arguments taken from Brentano:—

(1) (p. 107) "There is no contrast between mere ideas as such, except in so far as their objects are contrasted. The antithesis of desire and aversion is of a different nature. It neither is, nor implies, a contrariety in the mode in which consciousness may refer to one and the same object. Now

the opposition of assertion and denial is in this respect entirely analogous to that of desire and aversion."—For me, the opposition of assertion and denial means the opposition of apprehension-of-presence in the abstract to apprehension-of-absence in the abstract; which is no doubt similar to the opposition of abstract desire and abstract aversion. Special apprehensions need not contrast or conflict any more than special impulses (whether desires or aversions) need do so.

(2) (p. 109) "In ideas there is no intensity except that which belongs to the presented content of consciousness. The reference to a subject has no intensive gradations." But "assurance or conviction certainly admits of degrees". There is an "essential difference between the quantitative gradation in firmness or fixity, which is proper to belief, and the quantitative gradation in vehemence or vividness, which belongs to presentation".—Certainly, every apprehension has many qualities, and the stability of its content depends very little on that content's vividness; or, as Dr. Stout points out (110, 111), on its third quality of definiteness and distinctness.

(3) (p. 111) "Brentano points out that mere ideas cannot strictly speaking be right or wrong. . . . Within the sphere of desire . . . it is otherwise. Here we find a distinction between the morally good and the morally bad. Similarly, in the case of belief there is a corresponding distinction between truth and error."—Dr. Stout quotes this argument without making himself responsible for it, and I am inclined to think that the facts concerned will fit in more readily with my view than with Brentano's. For in the sphere of desire there can be no distinction of good and bad until concrete details are given. Until you state time, place, person, motive, and circumstances, "the desire to go to London" can be called neither right nor wrong. The case of apprehension (or judgment) is exactly the same. "To apprehend family life" is an abstraction on which no verdict can be passed. The apprehension of family life as being an interesting subject for discussion, or as normally involving father, mother, and children, is true. The apprehension of it as essentially an affair of contract, or as existing in Plato's Republic, is false.

"In conclusion," says Dr. Stout, "we may say that the difference between believing and having an idea coincides with the difference between the question, Do you *understand* this proposition? and the question, Do you *assent* to this proposition?"—This is the difference between apprehending a

statement as *intelligible* and apprehending it as *correct*.[1] In each case we are making a judgment about the statement; we have that apprehension of it which implies a belief.

Let us turn now to Dr. Stout's later statement of his position, in *The Groundwork of Psychology*, p. 19 and onwards.

(*a*) "It is one thing to apprehend the meaning of a proposition and another to believe, disbelieve, doubt, or question it." The first four of these have already been dealt with. Questioning will fall partly under the same description as doubt; the apprehension "A is $x$ or $y$" urged to further refinement by the apprehension "it is $x$ *or* $y$". The remaining part will be, I think, what Dr. Bosanquet calls it; not a special kind of cognition but an imperative; "tell me which it is".

(*β*) "To think of a thing is not the same as affirming or denying its existence."—No, for these are only two of the many aspects in which it may be thought of. This is illustrated by an example given presently; "the bare thought of being hissed may affect an actor disagreeably and the mere idea of a comic situation may excite laughter". A situation, that is, may be apprehended specially as being in actual existence, or it may be apprehended as being comic, or else simply as being "thus and so," as containing such and such a detail, and the laughter may follow immediately.

(*γ*) "Suppose that a man is absorbed in the enjoyment of the beauty of a picture. He is aware of the picture as really existing, and so far his mental attitude is one of judgment or belief. But this unformulated judgment is in the background of consciousness. It has nothing to do with the man's enjoyment. His interest is not in the real existence of the picture but in the mere presentation of Reality. If it threatens to fall and he stretches out his hand to save it, there is a transition from interest in what is simply apprehended to interest in real existence. A similar change of attitude takes place if he passes from purely æsthetic contemplation to the business of purchasing the picture." This is a curious and difficult argument, and offers several different points for comment. 1. I should of course agree that to be aware of the picture as "really existing" was itself a belief or judgment. To be aware of some other picture as "not really existing" would be unbelief, which again is judgment. There are many other alternatives: I may be aware of it as existing in the past, in the future, in a dream, on a condition, in somebody else's novel, in my own novel. All

[1] Or, if you like, between apprehending the content *as stated* and apprehending it *as being fact*.

these will be cases of judgment, though for my purpose in this article it is more convenient to call them simply awareness-of-existence. 2. Such awareness of existence is present in all apprehension. We are aware of existence even when we do not specify the object's particular kind of reality—the context or universe in which it exists. 3. This apprehension of the external context, as we might call it, seems to be of just the same nature as the apprehension of "internal context". We cognised the six dots of our first illustration as placed on an actual paper or on a remembered paper or on an imaged paper or an imaginary paper; we also cognised them as being six and as being arranged in a rectangular figure. There seems no great reason for distinguishing the first set, under the name of judgment, from the second under the name of apprehension. When Dr. Stout says that the spectator's interest "is not in the real existence of the picture but in the mere presentation of Reality," I should express the same thing by saying that the interesting and prominent part of the presentation before him consisted not in the external context of the picture but in its internal detail.

4. When the picture threatens to fall, the spectator's submissive cognition is interrupted by an *impulse to alter* what is cognised. Now the means of altering a presented thing must be largely conditioned by the kind of universe in which the thing exists—a universe of actuality, of memory or expectation, of fiction, or whatever it is. Hence the apprehension of "external context" is likely to become more prominent than before. Fresh interest attaches to the cognition of the special kind of reality possessed by the object before us. But I am unable to see that this cognition is of a different kind from the cognition of the other aspects which interested us. The two seem equally worthy to be called judgment, and equally well called apprehension.

(δ) The next illustration is from "the play of fancy," and in essentials I have already dealt with it. My claims would be (i.) that when we create a fictitious situation we have just the same conjunction of creation and cognition as when we shape a model out of actual clay, or arrange six dots on an actual piece of paper; (ii.) that to apprehend any of these is necessarily to apprehend them as existing, though not necessarily to cognise the special nature of their existence; (iii.) that the cognition of this special nature, when it does occur, is of just the same sort as the cognition of any other aspect of the object, and is best described by the same name.

(ε) Lastly, "an illustration of a different sort may be drawn

from the use of words in speaking, reading, writing, and silent thinking. The words as printed or written characters or as articulated sounds are somehow present to our consciousness. But we are not usually forming judgments about them. So far as we judge, we judge concerning that which the words signify. As articulate sounds, or as printed or written characters, the words are in the main objects of simple apprehension merely." The words here seem to be subordinate though necessary details in a whole of presentation. We apprehend them in dim consciousness; in clearer consciousness we apprehend their meaning. This meaning we cognise as "being thus and so," and may or may not cognise it also as true, striking, or beautiful. Nowhere does judgment enter in any sense in which it is different from simple apprehension.

I have not been oblivious of Dr. Stout's use of his division to explain error, in his admirable article in MIND for January, 1908. It would, however, be of little use to attempt to discuss this until the doctrine has been further developed in the other articles he promises.

To sum up:—It appears that all kinds of the process which is called presentation in one aspect and cognition in the other are of the same nature, and had better receive the same name. They may, if we wish, be all called judgment, but it is more convenient and more in accordance with ordinary language to call them all apprehension. All (except possibly the extremely rudimentary form) involve some discrimination of features in the presentation-continuum. All involve cognition of the thing as existent, though the special nature of that existence need not always be specified. If the name of judgment is to be kept for one special process, it will certainly, I think, be best to keep it for the element of discrimination of the different *kinds* of reality. But this discrimination seems to be so much the same process as other kinds of discrimination that I greatly prefer not to give it a special name. With regard to Dr. Stout in particular, I find a difficulty in deciding whether or not just this is the distinction he wishes to make. Some of his examples are appropriate to it, but some seem to suggest a rather different line.

The best of giving up the traditional division is that so many traditional logical difficulties disappear with it. We have made this part of the mystery of judgment for ourselves. "Seeing is believing," when we remember that sight is not restricted to the eye of sense, and that the actual universe is not our only landscape. Reality presents itself to us on every hand, and to judge is simply to allow ourselves to see.

## V.—DISCUSSIONS.

### "THE AMBIGUITY OF PRAGMATISM."

Mr. Bradley's struggles to show that pragmatism is mere folly continue to give opportunities for further explanations, and it matters little whether he personally continues, as he says, to find them unattractive reading. By degrees it will perhaps become clear, at least to others, that the question whether "theory has any value except of a borrowed kind" is a sham question if it be interpreted as already containing its own answer. The metaphor about *borrowing* its value from practice appears to imply that theory would still be theory if it declined the loan; which is one of the main questions at issue. Since the pragmatist maintains that a so-called theory may be mere verbiage, and that the question whether it is so or not depends on its having a practical meaning, what is the good of asking him to assume that anything called a theory is thereby shown to be *not* mere verbiage but something capable of truth or falsehood? The straightforward question is whether the pragmatist contention about the need of a meaning, and the nature of a meaning, is sound or not. This is the most elementary doctrine of pragmatism, and one cannot help wondering why its opponents go so far out of their way to avoid discussing it. A possible explanation is that the doctrine is too new to suit their habits of thought.

Mr. Bradley tries also to make capital out of the difficulty on pragmatist lines of getting any satisfactory test of truth,—the old difficulty which attaches to all progressive knowledge. Here however he drops into his habit of refuting what has never been said or suggested. If he could have brought forward an instance of a pragmatist having pretended to possess any means of avoiding future surprises due to present lack of omniscience, he would have had some justification. Meanwhile his objection reminds us rather of the Roman Catholic complaints of the dogmatism of science. The pragmatist is as much, and as little, committed to the discovery of a test of truth as the man of science is. If there is any difference between them at all, at least both are alike in their readiness to let new truth supersede the old. And that is where both differ from their opponents. The anti-pragmatist still dreams of an eternal and unassailable truth, while the pragmatist (like the man of science) sees our human need of putting up with truth which has its day and then gets lost in fuller explanations.

But perhaps the acuteness of the controversy is already waning. Mr. Bradley has certainly made, in this article, some remarkable admissions, and if he adheres to them the pragmatists will be more than pleased. Again, it is satisfactory to find (p. 230) that he is at last content to use the name 'scepticism' to express the modern systematic readiness to recognise the uncertainty of our knowledge in contrast to the older use of the word which a few years ago was the only use he would allow. It is satisfactory also to find that he no longer thinks "a blind appeal to theoretical consistency and an uncritical faith in the ultimate validity of some undiscussed Law of Contradiction" a sufficient basis for a metaphysic. If the pragmatists have in any way helped to bring about these improvements, they may feel that their efforts have not been altogether wasted.

ALFRED SIDGWICK.

## IS MR. BRADLEY BECOMING A PRAGMATIST?

THIS is evidently a difficult and important question. Its difficulty may be gauged by the fact that Mr. Bradley himself in the last Number twice professes himself unable to answer the question—'Am I a pragmatist?' (pp. 226, 231), its importance by the fact that if he is, the most promising controversy of recent philosophy is threatened with extinction. It obviously, therefore, ought to be discussed.

What is at first less obvious is that it should be discussed by me. From Mr. Bradley himself indeed it is clear that the public has little more to expect. But he makes it pretty plain also that he would prefer to be told where he stands with regard to pragmatism by Professors James and Dewey. The readers of MIND, however, may quite reasonably think otherwise, and recognise my numerous qualifications for this responsible task. (1) For one thing, I have discussed this very question before, most recently in N.S., No. 63 (pp. 401-409), *apropos* of Mr. Bradley's very interesting, but no less obscure, paper on 'Truth and Copying' in N.S., No. 62. A year ago I had reluctantly to come to the conclusion that he fell short of being a pragmatist in certain specified respects. Six of these seemed certain and a seventh doubtful. The doubt as to the last was due to a doubt as to what Mr. Bradley's theory of truth ultimately meant. It had to be left in a trilemma. If it was neither to relapse into a slightly-veiled form of the 'copy-theory' rejected in the same article, nor yet to render truth impossible by definition, *i.e.* to mean neither absolutism nor scepticism, it could mean only pragmatism. And it was duly pointed out that in itself this last was the most reasonable conclusion, if the hypothesis of a radical change in Mr. Bradley's position could be entertained.[1]

(2) I have long been a devoted student of Mr. Bradley's writings and of his psychology, and (3) largely in consequence of this, a zealous advocate of pragmatic methods. (4) In philosophy, as elsewhere, personalities do not always harmonise. Prof. James seems to find discussion with Mr. Bradley as little to his taste as Mr. Bradley does discussion with me. These pathetic discords serve opportunely to remind us how dependent on human idio-

[1] N.S., No. 63, p. 407. In the light of later revelations it is more probable that Mr. Bradley really did mean to adopt the sceptical alternative, but was unwilling to say so plainly.

syncrasies even the austerest philosophy always is. But it would be a pity, on this account, to balk philosophy of the discussion altogether. If Professors James and Dewey should wish also to answer for themselves, all the better.

(5) On the other hand, discussion by me would seem to labour under the disadvantage that any enlightenment it has contributed, and may contribute, is wasted upon Mr. Bradley himself. For we now have it on his own authority (p. 226) that he has long ceased reading anything I write—ever since 1902, to judge by internal evidence.[1] But after all it is chiefly Mr. Bradley's own concern how far he chooses to make his writings irrelevant to the actual state of the discussion, and he rates himself too cheaply, if he thinks that the changes in his position are of interest to himself alone. Controversy, moreover, does not always aim at, and very rarely achieves directly, the actual conversion of the parties to it. It is generally enough if the bystanders should be able to perceive which way the issue goes, and if it goes by default, the object lesson is all the more impressive. Lastly, as regards the objective discussion of a question, it is a positive advantage to feel that the object of one's criticism is no longer taking cognizance of it. It is a pleasing relief to think of Mr. Bradley as an influence like Plato and Aristotle, no longer subject to human frailty and impassive to mere human criticism. One can write so much more freely.

We may begin then by noting that the question of Mr. Bradley's relation to Pragmatism resolves itself strictly into three. (1) Has he always been a pragmatist? (2) Is he a pragmatist now? (3) Is he becoming a pragmatist? The first may be dismissed briefly: to answer in the affirmative seems an excess of paradox. It would render unintelligible the philosophic history of the last ten years. No pragmatist would then ever have dared to differ from Mr. Bradley, or have been revolted by his absolutism. In point of fact no pragmatist has ever ventured to claim him as an ally. The utmost any one has done has been to point out that there were contained in his works certain ideas which, if logically developed, should lead to pragmatism.[2]

The second question is more debatable. Conscientious examination of the case as it stood a year ago showed that although Mr. Bradley had overtly parted company with the Absolute and promulgated a theory of truth of which the most reasonable reading was pragmatic, he could not then be called a pragmatist. But

[1] Any one who took the trouble to compare Mr. Bradley's polemic with the texts impugned must long have suspected this. In N.S., No. 52 (p. 528), I pointed out that Mr. Bradley had not apparently grasped anything beyond the preface of *Humanism*, and made a list of nine gross misconstructions, many of which one regrets to see are still paraded, just as though they had never been repudiated.

[2] *Cf. Studies in Humanism*, pp. 115-118.

since then fresh evidence has come to hand, in the shape of his article on 'Memory and Judgment' and his discussion on Pragmatism, both in N.S., No. 66, and as philosophy just now is almost as progressive as physics, the third question is well worth examining

We will begin, therefore, by examining Mr. Bradley's article, which not being controversial is less open to suspicion of either over- or under-statement. For in controversy writers often say both more and less than they mean. Nor is it a serious objection to this course that Mr. Bradley has taken pains to assure us that this article was written four or five years ago (p. 153 *n.*). If so, it must have been composed just about the same time as his famous caricature of humanism in N.S., No. 51, in which he professed to be quite unable to see the point of the new doctrines. It is significant, therefore, that he should have withheld it from publication then, and doubly so that he should propound it now.

## I.

Critical examination of this article yields evidence both for and against a pragmatic interpretation of Mr. Bradley's new philosophy. Stating the former first, we find (1) that Mr. Bradley is now seriously concerning himself with what is after all the fundamental issue raised by humanism, *viz.* the psychological dependence and psychical context of all logical thinking, and even if he does not yet make quite clear his conception of the relations of logic and psychology, showing himself quite at home in the borderland which joins them. His own argument too is distinctively psychological, and (except where it eddies round the relics of some of his ancient snags) flows smoothly and directly on, in a manner quite unlike the tortuous and tormented course to which 'pure logic' seems condemned.

(2) Mr. Bradley no longer conceals his idiosyncrasy behind the Absolute's portentous mask. He has adopted quite a human and unaffected way of discussing questions. He no longer thinks it incumbent on him to be always speaking for the universe as a whole. He even confesses repeatedly to the 'inconvenience' of never considering anything less than the world at large.[1] 'Experience' is taken in quite a simple and human way.[2] Considerations of applicability, practical wisdom, and convenience are given a hearing.[3] That ambiguous but ambitious humbug, the doctrine that 'what has once been true is always true,' has its power for mischief curtailed by reservations; it is told that it is 'abstract' and incompetent to allay the doubt whether abstract truth is genuine truth at all.[4] In short, the *fiat veritas ruat terra* attitude of pure rationalism is conspicuous by its absence.

(3) On the other hand, the dependence of judgment upon purpose and interest is recognised repeatedly (pp. 165, 166). So explicitly,

[1] Pp. 162, 170, 172, 173. [2] P. 173. [3] Pp. 162, 171. [4] P. 173.

indeed, that one is almost emboldened to ask Mr. Bradley outright whether he would not now consider it logically inconceivable that *any* judgment should come into being without the psychical interest of some person to construct it? But once this is affirmed, the 'independence' of psychology claimed for logic clearly becomes a very queer and difficult thing to maintain. At any rate it is worth pointing out that Mr. Bradley now seems to concede the operation of interest to the full extent originally demanded.[1]

(4) Still more shocking to the old-fashioned intellectualist will be the definition of truth in terms of satisfaction. If "truth will be a judgment which, when we reflect, satisfies us" (p. 153), and if "a judgment in the last resort must in a sense depend on my feeling," and is "true or false in the end because it is felt to satisfy me in a certain manner, or felt again in a certain way to be offensive" (p. 172), 'truth' becomes a species in the genus 'satisfaction,' quite as irrevocably as when it is defined as 'logical value'. Nor can any insistence on the specific peculiarity of the so-called 'theoretic' interest undo the humanising effect of this classification. For no one has ever taken exception to the term 'theoretic' as a convenience of reference; what was condemned was the absolute severance from human interests which was advocated under cover of this name.

In spite of these handsome and in some respects decisive concessions, however, it cannot be contended that all traces of absolutism have been eliminated. Indeed Mr. Bradley begins his article with a fine flourish of absolutist principles. "Philosophy cannot exist apart from absolute sovereignty, and we have to choose between monarchy and chaos" (p. 153). This has the true ring of the absolutist faith in Truth by right divine, which must be all or nothing and cannot abide the licentious freedom of republican election by human voters.

But this impressive proclamation is wondrously attenuated in the sequel. The sovereignty of Absolute Truth is reduced to a constitutional monarchy of the most abject kind. The infallibility of absolute truth is proclaimed as an essential dogma in words alone; in practice it is restricted to the fleeting moment in which the judgment is made. "Our last judgment, and that is our present judgment, must be taken or rather must be treated as infallible" (p. 153), and while making it we "cannot entertain the possibility of its error". But as soon as it is made, we are free to turn upon it and to rend it. "You can reject it, in part or altogether, as a more or less complete mistake" (p. 154). Nevertheless it is superseded by a successor as 'infallible' as ever it was.

Nothing at first could be fairer or more charming. The absoluteness of Truth is maintained in all its theoretic rigour. And yet, in practice, ample room is conceded for the flexibility, which is

[1] *Cf. Humanism*, pp. 53-54, 58.

essential to the progressiveness, of truth. For *de facto* truth is in flux and at the mercy of the last speaker; the successive truths succeed (and fail) 'as Amurath to Amurath,' or (to be more modern) as the infallible successors of St. Peter. Truly this μονόχρονος ἀλήθεια, dignifying even the meanest with ecstatic gleams of infallibility, reminds us of nothing so much as of the pleasures of Aristippus! Or shall we even proceed to argue that since we are always in the presence of a 'last judgment,' we are all of us unceasingly infallible? It seems almost brutal to criticise so successful a synthesis of discordant views.

And yet does Mr. Bradley really think that he can thus slur over the breach between the immutability and the progressiveness of truth? No humanist of course need contest a verdict which awards him all the substantial stakes and merely saves his foe's face with phrases: but will the champions of the Eternal Verities be equally appeased? Have they not been rendered consummately ridiculous? To those afflicted with a sense of the humour of human things a claim to infallibility is always funny, and that it should be involved in the belief in absolute truth constitutes the crowning absurdity of this belief. But the infallibility becomes irresistibly comic, when it is such a little one, so overweighted with its name, and so ludicrously ephemeral. For Truth is no longer a possession for ever; it has become an indulgence for the moment.

Mr. Bradley, doubtless, has been subtly joking. He has been altering the meaning of the word 'infallible'. One can see of course what he means, despite the paradox, and thoroughly approve of the many sensible (and pragmatic) things he says in the same context about the way assertions are corrected, upheld, withdrawn and superseded. All that his paradox really means is that whenever we make a judgment we claim truth for it, and that it is recognised as claiming full truth, if its *bona fides* is not questioned. This much is a formal feature of all judgment as such. But how woefully little it is, in view of the way we habitually treat such claims after they are made! How few of them survive for any length of time! How needful it is to criticise them all! How little real validity this formal claim ensures! And so must not the verdict be that this whole doctrine of the 'infallibility' of the last judgment is merely one of the shabby little mysteries of Formal Logic?

If Mr. Bradley demurs to this conclusion, he must deny that it is psychologically possible to make a judgment with a full consciousness and anticipation of the probability of its failing. He must say that we cannot in making a judgment *expect* it to be falsified. It is astounding that he seems to say this—"I cannot, while I make a judgment, at the same time also doubt it" (p. 161). Why not? Where is the difficulty? It is always hazardous to dispute the idiosyncrasies of others, but can any one have become dogmatic and uncritical enough to have become incapable of doubting an

assertion he thinks just worth making? Most of us, at any rate, are quite capable of this. We have had much experience of past failures. We have learnt to judge in the light of past experience. We have acquired the habit of making *tentative experimental* judgments, recognised as such, just in order to try the alternatives and with every intention of dropping them as soon as they fail, and with little hope that they will succeed. What then is it but an abuse of language to describe judgments made in such a frame of mind as 'infallible'?

It is hard to believe that if Mr. Bradley had distinguished clearly between the formal claim of a judgment and its validation by subsequent experience, he would have mocked absolutism with this paradox. Unfortunately he does not avail himself of this distinction and thereby renders his doctrine (in so far as it is taken seriously) inconsistent and almost unintelligible.

On the one hand, as we saw, he maintains an 'infallibility' of the last judgment, which can only refer to claims, since, as he allows, it may always be reflected on and corrected. 'Infallibility,' therefore, is a property of *truth-claims* as such; it is possessed by 'truths,' misapprehensions, and 'errors' alike. This follows also from the social aspect of truth. In the absence of any Absolute which can enforce its infallibility with omnipotence, every one's judgments become equally 'infallible' with every one else's. If therefore A affirms and B denies the 'same' assertion, it is both true *and* false at the same moment. And that *infallibly!* In other words, we are driven back into that Platonic interpretation of Protagoreanism, which Mr. Bradley would presumably regard as the 'wrong' sort of 'scepticism'. Or will he postulate a Pope to give infallible decisions? Surely Mr. Bradley's doctrine leads to some curious infelicities of nomenclature!

On the other hand, he defines truth as "a judgment which, *when we reflect*,[1] satisfies us". If this be taken strictly, it identifies 'truth' with *validity*. For it implies that there is no 'truth' until there has been 'reflection'. It thus both excludes truth-claims, and overlooks the prospect of the *immediate* satisfactions which prompted to the claiming of the 'truth'. Surely the whole doctrine rests, flagrantly, on the 'ambiguity of truth'.

In any case, the doctrine of the infallibility of the last judgment resolves itself in the end into an ultra-Humian scepticism, which dissolves all continuity of mental life into momentary affirmations having no logical connexion with anything that precedes or follows. Whether Mr. Bradley himself has seen this consequence, and has intended it to be understood, is however another question, which we shall shortly have to discuss. Only it is important to observe how with Mr. Bradley (as with Mr. Joachim) the notion of absolute truth ends in scepticism, because for absolutistically biassed minds

[1] P. 153, italics mine.

the easiest way to pragmatism lies through a scepticism which shatters the absolutist conceptions by displaying their intellectual failure, and so leaves the mind open for the pragmatic reform of conceptions which will not work while they are taken intellectualistically. If, therefore, Mr. Bradley is moving towards scepticism, he may be on the way to genuine pragmatism.

But Mr. Bradley has never allowed his own thinly-veiled scepticism to interfere with his reprobation of other people's. So, here too, he adds a hit at his omnipresent double, the sceptic. This time he is discovered, paradoxically enough, in the disguise of a naive believer in the veracity of memory! The *tour de force* which reveals him in his naked iniquity contends that because Common Sense has discovered that memory is not infallible, it stands committed to regarding memory as utterly fallacious. "If my present judgment is to depend on something falling outside of itself,[1] then unless that something can be taken as infallible, my judgment must be taken as liable to error" (p. 157). By this argument Common Sense is to be intimidated into 'unlimited scepticism'. But surely 'liable to error' does not usually mean the same as 'positively erroneous,' and even in formal logic it does not seem legitimate to infer from the admission that 'some memories may be wrong,' that all must be. This hectoring of Common Sense, moreover, seems the more unkind that it really agrees entirely with Mr. Bradley as to the value of memory. Like him, Common Sense holds that though memory may err, it is better to trust it until grounds for suspicion arise. Mr. Bradley treats it as the Platonist does the Protagorean when he declares that 'man *is* the measure of all things' means 'man can measure and know nothing,' and that 'all assertions are true to some one or other' means 'nothing is true to any one at all'. But to twist the plain meaning of such assertions into a constructive scepticism is merely to reveal a deeply ingrained sceptical bias of one's own. Mr. Bradley, moreover, reveals his scepticism also in his fine contempt for consistency, even with himself and in the same paper. For when condensed to its essentials, to what does his argument on page 157 reduce itself but this—'You feel certain, ∴ you are a sceptic'? Whereas on page 161 it runs 'I doubt, ∴ I am infallible'! Such results as these show that the sceptical 'moment' in Mr. Bradley has been gaining at the expense of the absolutistic, and prepare his readers for the astounding licence of his 'practical creed'.[2]

## II.

We come next to Mr. Bradley's Discussion on the 'Ambiguity of Pragmatism,' and there find him as careful as ever to avoid contest-

[1] This narrow interpretation of what is 'inside' the judgment, is hardly consistent with the subsequent discussion of what the 'unity' of the 'subject' involves.

[2] P. 230; *cf.* p. 381 of this article.

ing the primary affirmations of Pragmatism, and as eager as ever to contend that if there is any truth in Pragmatism, he has said it all years ago. His own position, however, continues to differ markedly from the pragmatic, and he finds a number of difficulties in the pragmatic doctrines he considers. His objections may be divided into (1) those which are simply irrelevant, (2) those which arise from a disregard of already extant answers, (3) those which betoken a misconception of the pragmatic method, (4) those which answer themselves, and (5) those which it is perhaps expedient to discuss.

(1) Of the first kind the chief example is his demand to know what Pragmatism thinks of ethics and æsthetics. Why he should be so insistent about this, is unfortunately never explained. For the question is simply irrelevant. Pragmatism does not, as such, have any opinion in these subjects. The mystery is to understand why any one should think that the adoption of a pragmatic theory of knowledge should alter his tastes and affect any man's enjoyment of æsthetic and ethical values. Why should the perception that truths are values interfere with the recognition of any other immediate or end-values? Mr. Bradley should really condescend to explain why a pragmatist should not enjoy his dinner or his golf. As it stands the objection appears to rest on a confusion of logic with ethics and æsthetics. For plainly pragmatic *logic* is not concerned with the ultimate *ethical* end, or the nature of *æsthetical* value.[1] Its observation of the ways in which men make truth is not affected by the diverse nature of the ends which inspire truth-seeking or of the immediate satisfactions which the process yields. For example, to controvert Mr. Bradley may be deemed by one good sport, by another painful duty; but the zest of the one and the reluctance of the other do not necessarily show themselves in the arguments they use. The pragmatic method assumes nothing but the existence of values. It is neither concerned to affirm nor to deny that what has value as a means (instrument) has or has not value as immediate experience. It claims to represent the actual procedure of all, whatever their aims and whatever their satisfactions. Mr. Bradley has been told this before, by Prof. James, as well as by others, but he seems unable to see that a method is not bound to be a metaphysic.[2]

Difficulties of the second class are found in his allusions to the making of truth, the relation of social to individual valuations, the nature of unpleasant truth and the problem of error. In the third class must be put his difficulties with the long run, *i.e.* the progressive revision of decisions, and his demand to have an *ultimate* test of knowledge and validity (pp. 228, 235), which ignores the constant

[1] It is not, however, true that their existence has been denied. *Cf. Humanism*, pp. 203, 212.

[2] And yet he can excellently declare that he has "seen far too much of metaphysics to think of staking vital issues on the results of speculative inquiry"! (p. 229).

revaluation of truths, and moreover does not seem to be consistent with the account on page 230 of his own 'practical creed'. Under this head would fall also the naive example he adduces of a useless truth (p. 227). For it clearly assumes just the sort of abstract case of an already-made truth, which the pragmatic method condemns as utterly uncritical. In the concrete no man would believe in his wife's infidelity except upon what seemed to him sufficient evidence. He would always, that is, have to *prefer* this belief to an alternative, and regard it as the *less unpleasant* of the two. He might even derive a certain positive satisfaction from it, *e.g.* as explaining a resemblance in his child which had long puzzled him. So much for the use in the handling of experience, which would lead to the acceptance of the 'unpleasant truth'. Subsequently it might continue to be useful, and profoundly affect his future action and even the course of history. It would therefore be a 'useless' truth only in a very popular sense, and so long as Mr. Bradley can think that such objections are relevant he simply shows that to understand a method is quite a different thing from adopting some of its results. It evinces perhaps a similar failure to grip the pragmatic method when Mr. Bradley argues (p. 236 *n.*) that a Darwinistic account of truth as that which prevails cannot be consistently universalised. Why not? Surely neither the Darwinist nor the pragmatist are concerned to show that their conception satisfies the rationalist's notion. It is enough for them if their 'truth' works and prevails and their general theory of truth freely submits its truth to its own test.

Among the difficulties of the fourth class the question of what 'practice' means stands out. It clearly depends on how 'theory' is understood, and on this point it may be well to repeat the explicit answers already given.[1] The fundamental 'ambiguity' Mr. Bradley finds in pragmatism has a purely verbal origin. It is a question as to how the terms 'theory' and 'practice' are to be applied to cognitive situations. Mr. Bradley greatly confuses this issue, through paying no attention to pragmatist usage and insisting in foisting his own rationalism upon it. Here then is the first of the points to be further elucidated.

(1) Mr. Bradley's use of 'theory' and 'theoretic' is profoundly unpragmatic, and has been criticised as such.[2] Naturally, therefore, he is perplexed when he tries to read it into Prof. James's utterances about the 'theoretic'. For the latter, as he clearly explained long ago,[3] uses it as a current term, and without prejudice to his right to explain it humanistically. To avoid such confusions it is necessary to distinguish three things—(*a*) The current usage of 'theoretic' as a term of reference, the interpretation of which is in dispute. It is imperative to treat this term as neutral to begin

[1] *Cf.* James, *Talks to Teachers*, pp. 26-27, and *Studies in Humanism*, pp. 128-131.

[2] *Studies in Humanism*, pp. 126-128. [3] *Loc. cit.*

with, because otherwise there is nothing to dispute about. For if it is taken rationalistically, pragmatism is clearly non-suited; if it is taken humanistically, rationalism becomes a false inference to an otiose transcendence.

(*b*) The rationalist interpretation evolves out of the usage a belief in a *purely* theoretic, *independent* and *useless* knowledge, which is conceived to be 'higher' than the useful variety, and can easily be made to glide over into an assertion of a *transcendent* truth. It is this belief which Mr. Bradley never quite shakes off,[1] though at times he cannot but perceive its psychological impossibility.[2] To clear his position here of ambiguity he would have to formulate more explicitly his views on the relation of psychology to logic. But the general objection to this way of taking 'theoretic' may be put in the question—If every cognition, if every judgment, can come into existence only by commending itself to some human mind, how can it be said to be independent of its psychical context, or pure, disinterested and useless?[3] This question was formulated very early in the controversy, and so far no rationalist reply to it has been attempted.

(*c*) The humanistic explanation of 'theoretic' has avowedly a double root.

(1) All cognitions arise out of a psychical context. (2) It is an empirically observed fact that knowing is a biologically valuable function. At first these two *aperçus* seem discrepant, because not everything that seems psychically valuable to an individual is also biologically valuable and worthy of promotion to the rank of 'objective' truth. But this discrepancy is no help to rationalism; for neither biology nor psychology can sanction a 'pure' and 'independent' theory. Such phrases are merely popular, unless they imply a real transcendence of human cognition. If they are taken strictly, there are *no* truly theoretic functions, and 'theoretical interest' is a contradiction *in adjecto*. *All* interest is human; all truth is humanistic. Moreover it is soon seen that the biological must exercise a certain control over the psychical values. Neither intellectual games nor morbid or excessive addiction to less profitable forms of knowledge can be indulged in without limit. This also was pointed out very early.[4] This whole humanistic derivation of the theoretic Mr. Bradley has steadfastly declined to recognise; but he has no right to ascribe ignorance of it to Prof. James.

(2) His reason probably lies in his conception of the relation of origin to validity. This antithesis is taken quite abstractly and without regard to the connexion between them. Mr. Bradley seems to think that even though the cognitive functions must be admitted to have arisen out of practical necessities, they may yet have *become*

[1] Pp. 227, 231, 232, 233, 237. [2] Pp. 233-234.

[3] *Cf. Humanism*, p. xiii.

[4] *Cf. Personal Idealism*, p. 85 *n.*; N.S., No. 59, p. 386 *n.*, and *Studies in Humanism*, p. 7.

'independent'. *How*, he never explains, and nothing would conduce more to making intellectualism intelligible than that some one should undertake to fill up this gap. Anyhow there is no other way of meeting the humanist contention that relation to human purposes guides and controls the development of the 'theoretic' function throughout.[1] Until this contention is met, 'independent' must be taken strictly as = 'transcending human knowledge'.

(3) That Mr. Bradley should now for the first time seem to disavow this 'transcendence' is not the least curious feature in his article (p. 227). And if it either had been or could be disclaimed, it would have to be admitted that the backbone had been taken out of the controversy. But can it? Has it not been the chief offence of Absolutism in pragmatic eyes that the absolutist view first put truth out of connexion with human knowing, and then asserted an unintelligible 'correspondence' between them?[2] Mr. Bradley's conversion is a bit too sudden. One can hardly believe one's ears when one hears him assert that he has "now for some time accepted" the impossibility of the transcendent correspondence. When, how and where did he 'accept' it? Was the Absolutism of *Appearance and Reality* nothing but a practical (*sic!*) joke played on his fellow-philosophers? Anyhow it would be interesting to know the date. Last year the 'transcendent correspondence' still figured as the most obvious of the three possible interpretations of his theory. And even if the enigmatical article in N.S., No. 62, were to be read pragmatically, he can hardly hope to pass off the point so easily. His old theory has been attacked by various pragmatists as involving this transcendent correspondence so long, and he has been so reluctant to reply and to show how this attribution could be avoided, that they will naturally insist on slaying the fatted calf in honour of his conversion.

These three points cover all the questions on which Mr. Bradley had a right to explanations, and it will be seen that the differences between him and pragmatism are still formidable. But something must be set against them.

(1) First and foremost the final admission (p. 237) that "for truth to pass into a new practical result may be called truth's natural and normal end". Before that he had 'agreed' (p. 235) that "when we reflect and when we come to the criterion of truth, the truth of an idea is inseparable from its theoretical results". This sounds remarkably like the principle of Peirce. Clearly, however, the substitution of 'theoretical' for 'practical' will make a vast difference, unless the former is taken in the humanistic sense explained above. With Mr. Bradley's use of 'theoretical' this would not be possible. Even in his sense, however, it involves a recognition of a principle which logic hitherto has failed to admit. It ex-

[1] This indeed is the essential point. The *origin* proper of truth is not strictly a *scientific* question. It is conceivable as an 'accidental variation'.

[2] *Cf. Studies in Logical Theory* and *Studies in Humanism.*

cludes a *merely formal* view of truth,[1] and so should involve the distinction between truth as claim and as validity. But it is not explicit enough, and in view of the confusion as to this distinction noted above (p. 375), it is doubtful whether Mr. Bradley would go so far.

The conceptions of truth as (2) logical value and (3) yielding psychical satisfactions reappear in this Discussion (pp. 228, 231, 233), though not perhaps as evidently as in the article, in dealing with which their significance has already been discussed. The unity of the good and the true, however, is still contemplated as a distant, and probably unattainable, ideal. Mr. Bradley has not yet condescended to study it as an empirical occurrence in every 'true' judgment which is pronounced 'good'. It is worth noting also that though Mr. Bradley does not hesitate to appropriate the 'principle of immanent Reality' (p. 229) he does not state that all these principles have secretly been familiar to him for the past quarter of a century.

(4) There remains Mr. Bradley's "practical creed," as described on page 230, that "there is in the end no truth for us save that of working ideas". This sounds very pragmatic, as do the admissions that our individual sense of value is ultimate, and that no theoretical criterion which actually so far exists is final. All this seems closely akin to the insistence on human values and the emphasis on the progressiveness and continuous remaking of truth, which render humanism so irreconcilable towards a static Absolute.

Nevertheless these dicta are all set in a context which renders their meaning decisively different. Their true analogue is not the pragmatic Criticism, but the Humian scepticism, which also sought to atone for its philosophic failure by laxity of practice. It should be noted (1) that until a year ago Mr. Bradley's scornful concessions to the weakness of human truth—'anything handy is good enough for practice'—always used to be contrasted with visions of an absolute truth, possessed *ex officio* by an Absolute which existed expressly for the purpose of transcending the difficulties of Mr. Bradley's philosophy. But it has probably been noticed that ever since the Absolute was attacked, it has disappeared, as though by magic, from Mr. Bradley's vocabulary. It was absent in N.S., No. 51. And in N.S., No. 62, it was finally thrown over. The consequence was that the implications of Mr. Bradley's doctrine became wholly sceptical. But until now this was never publicly admitted. The immense importance of the present passage lies in this, that Mr. Bradley, after a long course of privateering under the Absolute's flag, at last hoists the Jolly Roger, and avows himself a sceptic. The 'theoretic' truth which is unattainable by man is retained simply and solely in order to discredit theoretically the 'practical creed' men are forced to live by. And as it is assumed

[1] In Mr. Sidgwick's sense.

that the latter is hopelessly inconsistent, we are further told it does not matter how blatantly contradictory are the ideas we choose to live by. Any old nonsense will do—with a sardonic sneer at religion. Thus the doctrine is not only (1) sceptical but also (2) intellectually demoralising.

Now it ought to need no pointing out that neither part of this reasoning can be approved by pragmatism. It must contest the right ('theoretic,' if you please) to retain the void and empty notion of a 'theoretic' truth which has been eviscerated of its content and stripped of every function but that of confounding our truth. But the retention of this *caput mortuum* of a defunct intellectualism seems wholly optional. If it is cancelled, *'practical' human truth becomes the only truth there is.* How then can it be otherwise than valid and *optimi juris?* The foundations of Mr. Bradley's scepticism are exploded.

Again (2) while pragmatism desires, as zealously as Neo-Bradleyanism and in contrast with the more stalwart version which insisted on the 'metaphysical satisfaction of the intellect alone,'[1] to do justice to the whole of human nature, it must shrink from the licentious demand to be "emancipated once and for all from the narrowness of all one-sided attempts at consistency". It will not at once abandon thinking as soon as it has discovered a flaw in the instruments past thought has fashioned. It need not ascribe infallibility to their makers. It sees no reason to attribute the 'contradictions' which wrecked the 'theoretic' reason to anything more irreparable than the use of false conceptions and a false method worthy of repudiation. It is conscious, moreover, of having a method of its own of appraising the intellectual status of rival theories. So long as these exhibit vital value in various degrees and kinds, their logical value can be determined, and no abatement need be made from the rigour of its reckoning. Logic, therefore, is reformed and not rejected.

What then is the upshot? These latest utterances of Mr. Bradley's reveal the full marvel of his philosophic position. He is engaged in the arduous feat of trying to ride three horses at once, Absolutism, Scepticism and Pragmatism. Not abreast, however, but in succession. For at present Scepticism is distinctly to the fore, with Pragmatism running up, and Absolutism, evidently beaten and no stayer, a bad third.

Has Mr. Bradley then declared to win with Scepticism? May we exclaim "*das also war des Pudels Kern*"? Is its ultimate triumph assured? Not at all. Nothing is more improbable or even impossible. For Mr. Bradley's Scepticism is a very peculiarly sociable thing and cannot live alone. It is so essentially bound up with his absolutism and his pragmatism that his present posture is not a vain

[1] *Cf. Appearance and Reality*, p. 154.

display of acrobatic virtuosity, but a matter of sheer necessity. His philosophy vividly reminds one of the story of Zohak and his serpents. It was pure absolutism once, some time in the dim past, till the Demon of Doubt embraced it. And then there sprang up out of it with lambent tongue the coiling snake of Scepticism, and on the other side to balance it the Pragmatic snake-devouring Dragon.[1] It loves neither and neither love it or each other, but it can divest itself of neither, because both are of its essence and necessary to its being. The Scepticism, which seems the greatest part of it just now cannot stand without the support of Absolutism, nor move without Pragmatism. For unless the absolutistic notions of truth and reality which Mr. Bradley's Scepticism feeds upon are eternally retained for this very purpose, his Scepticism is deprived of nutriment and dies of inanition. Again, without a 'practical creed' the whole combination cannot live. To maintain itself in being it must incorporate ('somehow') the pragmatic values of truths that work. The Scepticism alone cannot stand the pragmatic test, and must call to its aid a certain pragmatism, to which it must subordinate even itself in practice. Its nature is thus essentially parasitic; on Absolutism for its 'theory,' on Pragmatism for its 'practice'.

And yet has it quite grasped that an *alternative* to it is intellectually in existence? Instead of retaining the faulty conceptions of absolutism and accepting their sceptical consequences, may we not avoid both the scepticism and the internal complications of Mr. Bradley's composite philosophy by systematically reforming the conceptions that have failed? The sceptical interpretation thereof after all was optional. It was even arbitrary, seeing that nothing guaranteed the infallibility and immutability of the absolutist conceptions and that we can avoid both the scepticism and the dualism between 'theoretic' and 'practical' truth which Mr. Bradley's choice entails, by adopting the pragmatic notion of truth. Lastly, it is clear that the existence of this alternative turns the sceptic into a sort of voluntarist, *malgré lui*. And this may so disgust him with his scepticism as to force him further in the one direction which is open. What will be Mr. Bradley's next move, therefore, is a pretty problem. Time will show. But it is no wonder that he is not inclined, just now, to answer searching questions about the state of his own opinions. And it is quite conceivable that some day he may himself dedicate to Asklepios the matutinal chanticleer that stirred him out of his coma in the night of the Absolute in which all human truths are equally obscured, and is even now summoning him to dismiss from his nightmare the obstinate spectre of scepticism.

F. C. S. SCHILLER.

[1] ὄφις ὄφιν κατεσθίων γίγνεται δράκων.

## PRECISE AND NUMERICAL IDENTITY.

THE following observations have been to some extent suggested by recent controversies in MIND, and are offered as a very humble contribution to the discussion of the question, What is the meaning of Identity?

It would seem *primâ facie* that corresponding to the two aspects of all 'things' which can be subjects of predication (and of their names), *identity*, *identical*, may refer to intension (qualitative aspect) or extension (denotational, existential aspect).[1] If (one thing) A is identical with (another thing) B, then identical must mean exactly alike, indistinguishably similar, 'precisely identical,' as we admit that two half-crowns are, when we put a private mark upon one as a means of knowing it from the other, of discriminating it as *not* numerically identical—in order, *e.g.*, to detect theft—or as we may admit two sheets of notepaper, or two penny stamps, to be. In such a case, there is intensional or qualitative, but not denotational 'identity,' precise but not numerical 'identity'. In the contrasted denotational (or numerical) sense of identical, a thing can be identical only with itself. Thus the stamp I now take out of my purse is numerically identical with the stamp which you gave me yesterday in exchange for another. Although indeed its perceptible attributes are unchanged, and it looks just the same, this is not all, for denotationally or extensionally it is the very same stamp, it is numerically identical—it has had, we will admit, a continuous existence from yesterday to to-day.

Further, this very stamp is the stamp which the English Ambassador at Washington affixed a fortnight ago to the envelope from which you cut it—it has had a continuous existence from that time to the present—we have not here a case of "mistaken identity". It has, however, since it was posted, changed in appearance, it has not the same visible qualities—it has been defaced by the Washington postmark—it has also had a corner torn off. Thus though

[1] I use *Intension*, *Connotation*, in the senses distinguished by Dr. Keynes, *Formal Logic*, 4th ed., pp. 23, 24. "The term *intension* has been used to express in the most general way that aspect of general names under which we consider not the objects called by the names but the qualities belonging to those objects."

"We include in the *connotation* of a class-name only those attributes upon which the classification is based, and in the absence of any of which the name would not be regarded as applicable."

this stamp is in a certain sense identical, *i.e.*, numerically identical, with its original self, it is not qualitatively or intensionally 'identical,' it is not *precisely* similar. In the same non-qualitative, most usual and perhaps preferable use of *identical*, we should say that King Edward VII. is the identical person who six years ago was Prince of Wales. So the Koh-i-nor, which now belongs to him, is the identical diamond which a few years ago belonged to Queen Victoria. In these cases it is in virtue of persistence through change of time, it may be with change of intrinsic quality yet always with a certain residuum of unchangingness amid change, that we attribute identity in the sense of continued existence. Thus, if this portrait is genuine, if it is what its owner claims, it is the identical picture which Gainsborough painted of Lady Mulgrave about the year 1785. If it has not changed, so much the better; but even if damaged, it is the 'identical' picture, it is not a copy or a counterfeit.—In each sort of case, we have a kind of unity in difference: (*a*) qualitative unity (= similarity) in distinct subjects of attributes, (*b*) the unity of continued being in change of time (and perhaps also of unchangingness in circumstances and relations not arising out of time-change) with or without some change of intrinsic quality.

Can we ever assert 'identity' (exact similarity) of intrinsic quality (= 'precise identity') in anything, combined with identity of being (*continuity of being, numerical identity*), and also without *any* change of circumstance or relation? It seems to me clear that this could be so only if we could have something which not only exists (or is) without change of intrinsic quality but also exists or is 'timelessly,' and that we could only express our assertion in the form *A is A*. But it would be necessary to inquire more particularly, What can be meant by 'timeless'? Does *timeless* mean (i.) what is not in time, does not last through time (some time or all time), or (ii.) what is not affected by lapse of time? If what is meant is (i.), the burden of explaining what exactly is connoted by 'timeless' being, occurrence, or cognition, and of pointing out to what *things* this timelessness can be attributed, lies upon the person who asserts 'timelessness'.

If (ii.) is meant, then it would appear that *timeless* can at any rate be asserted of any and every truth. In fact if truths were not all unchangeable, any assertion of change would become unmeaning. And in this sense we may too by a convenient and indeed necessary logical device attribute timelessness to Concepts (*i.e.*, to Abstract and to General Ideas), the *raison d'être* of which is to fix and symbolise exact qualitative one-ness. Absolute unvaryingness (precise 'identity') and continuous existence (continuous being, 'numerical' identity) of concepts may however be allowed to be a fiction, an ideal limit to which they approach more nearly, the more nearly they fulfil their indispensable function in knowledge.

(1) If we assume that both Subject and Predicate in a categor-

ical assertion can be taken *in intension only*, difference of quality or content would force us to say of A that it is not-A.

(2) Difference of being (extension or denotation) only, would force us to say that *A is-not A*. (1) and (2) are both impossible forms of assertion, and it seems that we cannot assert difference of intension only or difference of extension only. In the admissible and significant *A is not B*, difference of intension makes possible the assertion of difference (=denial of identity) of denotation.

(3) If there is complete absence of all difference of any sort, we can only say that *A is A* (Greenness is Greenness, Humanity is Humanity, etc.), the whole of A and nothing but A. Thus it appears that significant affirmation of *identity with itself* of any A, the identity of which is exclusive of *all* difference of every sort, is barred, and *A is A* seems a mere form unless we *interpret* it to mean *A is AB*, or *A is B*, both of which are embraced under S *is* P, the ordinary formula of categorical affirmation. In this formula the identity asserted is denotational, the copula has a denotational import, while the difference of symbols has an intensional import. If not, *S is P* would be an impossible form of assertion. For intensionally S *is* not-P, and unless denotationally S *is* P, we should have to say *S is not P*. This account is confirmed by analysis of any categorical affirmation (*cf.* MIND, 1893, p. 441, etc.).

(4) There may be many cases of 'identity' of both denotation and intrinsic quality, in difference of time, circumstance and relation (though we have to remember that so-called 'identity' of quality means only exact resemblance and is quite distinct from identity of denotation, extension, or being). Take such things as a postage stamp, a coin, a stone, a book, a picture. This book (*e.g.*) is the one which Colin gave me for a Christmas present; that sovereign is the one which you paid me yesterday in discharge of your debt; that picture is the one that was bought by a Mr. Campbell at the Price sale for ten thousand guineas. All these assertions are expressed in the form *A is AB*, and we see that while (as before observed) the affirmative copula imports identity of denotation, the difference of symbol (A, AB) imports here *not* alteration of the intrinsic quality of the subject (A) spoken of, but attributions (B) of time, circumstance and relation, all of which (as above remarked) are included in *intension* as differentiated from *connotation* (see note above, p. 384).

Assertions of change or otherness of intrinsic quality in a (denotationally) identical subject are conveyed by propositions of the form *A is B*. *E.g.*, the amethysts which Betty picked up at Aberystwyth have been cut and made into a necklace; the last pair of shoes which I had from Box is nearly worn out. And any assertions in which we affirm of any subject (A) a Predicate having an altogether different content (B) (whether B connotes intrinsic quality, or circumstance, or relation), fall also into the form *A is B*.

We have then the *primâ facie* possible forms:—

(1) A is not-A,
(2) A is-not A,
(3) A is not B,
(4) A is A,
(5) A is AB,
(6) A is B.

From the above it appears that in significant categorical affirmation there *cannot* be complete 'identity' of intension as between Subject and Predicate, while there is complete identity of denotation, and in categorical negation there cannot be difference of denotation only or of intension only. In *S is P*, I affirm *identity of denotation in difference of intension*, in *S is not P*, I deny *identity of denotation in difference of intension*, and as already pointed out the identity necessary to affirmative assertion must be denotational (numerical, etc.) identity.[1]

There is one kind of thing which taken strictly cannot enter into relations of thought or reality, and any attempts at affirmation about which fall into form (4), since nothing but itself could be affirmed of it as Predicate—*viz.*, Abstract Ideas in the sense in which Locke rejects them. We could not, *e.g.*, say of Humanity that it *is* anything but Humanity, taking it honestly in connotation only, (and as it is abstracted from Extension) its whole Intension is comprised in its Connotation. Man is rational, but it is not admissible to say Humanity is Rationality. Hence Locke asserts that all our affirmations are in concrete (*Essay*, bk. iii., ch. viii., § 1). Indeed such terms as Greenness, Rationality, which correspond to ideas of qualities abstracted from subject, time, and place, in which alone they can occur, if taken strictly cannot be either Subjects or Predicates, they are as incapable of entering into relations as Leibniz's *Monads*, and are supposed as immutable.

The fixity of the content of abstract ideas as entertained by any mind is guaranteed (so far as it is guaranteed) by definition of the names applying to the ideas—definition of the sort which sets forth conventional connotation, or (in some cases) extensional definition, *e.g.*, Green is the colour of grass, glaciers, sea-water, emeralds, malachite, etc. This holds of those relatively abstract ideas which are called General as well as of the Lockian Abstract Ideas—of green, man, rational, as well as of greenness, humanity, rationality. In the case of the general ideas, however

[1] Lotze, trying (in his *Logic*, bk. i., ch. ii.) to fit the ordinary categorical form *S is P* to the law of Identity (*A is A*), fails in the most absolute way, because he is trying throughout to work solely and entirely with Abstract Ideas; he is committed to a thorough-going conceptualism. After an elaborate discussion, he arrives in § 54 at the statement that "the impossible judgment S is P resolves itself into three others, S is S, P is P, S is not P". S is P "taken just as it stands" is "a contradictory and self-destructive form of expression". Quite so, if S and P are taken in connotation only.

(man, house, etc.), abstraction is made not from all denotation but only from denotation definitely fixed as to time and place, and from all intension except that which is selected and fixed in the definition (= connotation).

In these General Ideas we have a necessary instrument of thought. They fix, for thought, the living transient qualities of real existences. They can, it must be assumed, be applied in a variety of ways without being thereby altered—like the cubes of a child's letter game, or building blocks, or the men on a chess-board, or the cards of a pack, or the stones in a heap, or the letters of the alphabet, or the notes of the musical scale. Their very function and essence is to remain unchanged throughout an endless variety of applications. *They* are the only things which in so far as they are what they are meant to be, are the same (*i.e.* are unchanged), *semper ubique et pro omnibus*.

In use, in application, we have to restore the existential, denotational, time-and-space aspect, unique in every case, which (as well as much qualitative detail) falls into abeyance when an attribute as occurring in a Subject is abstracted and takes on the fictional provisional form of a Lockian Abstract.[1] And unless there were concretely related things from which general ideas of relations might be derived, it is difficult to see how definite concrete applications of such ideas could be made, why the idea-relations should ever fit actual things. In: This lake is sky-blue, Some rubies are rose-red, The Pacific Ocean is Atlantic-Ocean-colour, the notions of sky-blue-ness, etc., derived from Attributes of definite Subjects, are applied to Attributes of specified Subjects, and the denotation, which has been evanescently in abeyance, is restored. The notions of both quality and relation do not suffer any intrinsic alteration by being thus applied, in fact if they were changed by application it would not be they that were applied.[2] A general notion (unlike a living actual, continuously existing thing) if changed ceases to be itself, it vanishes and is replaced by something qualitatively different. And its connotation determines its whole being, so intensional change would involve numerical change.

And this characteristic of (relative) immutability (and consequent validity for thought) is none the less real because the origin and history of general ideas is to be sought in developing human experience, and connotational definition is both subject to revision and

[1] Compare, *e.g.*, the way in which quantification of the Subject-name in an A proposition falls into abeyance when the proposition is converted *per accidens*.

[2] *Cf.* Mr. F. C. S. Schiller's admission that in the sciences "respect for the sacredness of technical meanings is one of the first obligations inculcated on the student and constitutes a motive which only urgent scientific necessity and due notice avail to set aside" MIND, October, 1907, p. 605).

has generally been preceded (in the natural growth of thought) by extensional definition; while also general ideas as psycho-physical occurrences probably always occur in close combination with other "mental elements" from which the practised mind is able to make abstraction. The general idea is in fact a kind of selective instrument—like a magnet to iron-filings—the corresponding general name being (as has been said) a sort of handle of the thing named.

Let us consider for a moment here an illustration discussed by Mr. Joachim in MIND for July, 1907, p. 414. "The note A," he says, "whether struck on this piano or that, or now or yesterday, is *the same* [=?] note. But it is not 'precisely and numerically the same,' if that means—as I presume it does—*the same to the exclusion of all difference.*" It is (Mr. Joachim goes on to explain) *not* "exactly alike but not identical," nor is it "numerically identical," but it is identical-in-difference [=?].

Such explanation of the point in dispute as is possible is, I believe, to be found by appeal to the distinction already referred to between abstract scientific, logical, conventional connotation (which is set out in definitions), and what may be called 'historical' actuality (the full concrete denotational and intensional entity). If we grant (as I understand Mr. Joachim to affirm) that as logically fixed, limited and defined "the note A" has always precisely 'identical' pitch, then "the note A," as far as connotation is concerned, is under all circumstances precisely 'identical'.[1] If this is so, if it is a certain absolute pitch (abstracted not from denotation but from all other items of intension, from the instrument of production, and every other circumstance whether like or unlike, connected or disconnected, relevant or irrelevant) that is connoted by *the note A*—there is and can be only one note A in the sense in which there can be only one letter A (*a*), one number 2, four conic sections, three species of triangle, one relation between the diameter and circumference of a circle.

Any actually produced (or even imagined) "note A" which as regards the element of pitch is "precisely identical" with any other pure "note A," is yet never, in actual occurrence, in all other respects (timbre, loudness, time, place, etc.), recognised as exactly like any other; such occurrences would be indistinguishable the one from the other—if there *were* two, we could not know it. As it is, while there is by supposition only one pure note A (= a note of a given pitch), every production (repetition, occurrence) of that one note is different in *some* respects from every other, so there need be no difficulty about distinguishing the various produc-

[1] It may however, I suppose, be plausibly maintained that the connotation of the note A refers not to *absolute* pitch but to position in the musical scale. A piano, *e.g.*, may be tuned 'flat,' and 'concert pitch' has varied. Further, it may be said that on a piano of seven octaves, there are (7 × 3) note A's (if we may count sharps and flats as well as naturals).

tions—by voice, harp, piano, violin, etc. Similarly if with one seal I impress the same unique device on a hundred documents, or write the letter *A* or the word *And* all over a page, or the motto *Per aspera ad astra* over and over in various kinds of script, there is still as far as meaning, value, or relevant quality is concerned only the one device, the one letter A, the one word And, the one motto *Per aspera ad astra*. But the occurrences in writing are many, and each distinguishable from all the rest.[1]

In an analogous way the meaning of any significant assertion A is B, is not altered by any other assertion, nor its truth if it is true[2] by any assertion whatever nor by the concomitant mood or impressions of the assertor's mind or any other fact. Unless A at Edinburgh can deny precisely and numerically *the same* assertion (or truth) which B at Oxford affirms (not of course the same speaking or writing of it), there could be no such thing as agreement or disagreement in thought, no argument, no refutation—in fact no such thing as general knowledge common to many minds, or even general knowledge in any one mind. No doubt if we consider the whole concrete case of *B at Oxford affirming* and *A at Edinburgh denying*, it must be admitted that though what the one affirms is what the other denies, yet the 'identity' of the thesis is an 'identity' which has different concomitants in the one case from what it has in the other—there is, therefore (if we choose so to express the condition of affairs), a complex '*identity*'*-in-difference*. The intensional or qualitative '*identity*'*-in-difference* of *e.g.* an isosceles and a right-angled triangle, requires (as all classification does) the comparison of things numerically different which are partly similar and partly dissimilar.

But this difference in the time and place, etc., at which the 'thesis' is apprehended, has no effect upon its meaning; these relations of time and place are relations of the persons affirming or denying and concern the history of the thesis, but are of a kind which (though not irrelevant to its history) is quite irrelevant to its meaning or to its truth, if it is true. The meaning, whatever it may be, is no more affected by them than the meaning of *A is at Edinburgh*, or *B is at Oxford* is affected by being asserted (1) at Cambridge and (2) at St. Andrews. The differences between A and B, and Oxford and Edinburgh, are no doubt profound, and of interest and importance for the unique individuals and places concerned, and those who have to do with them, but they are not of consequence for the meaning of any general statement main-

[1] In all that is said above, it is of course not meant to deny that a definition may, from time to time, be altered, or that terms may be ambiguous. In fact it is the main object of these notes to try and clear up to some extent such an ambiguity.

[2] Might it be said that an assertion is true if it asserts co-existence of qualities which are co-existent in the 'Universe of Discourse' to which reference is made?

tained or denied by A or B, the intrinsic character of which remains unaffected by variations of time and place, and the personality of its assertors. If this were not so, everything, as in Alice's shop in Wonderland, would be perpetually turning into something else the moment one touched it. One could not even juxtapose two assertions in thought without thereby altering both. The "solid ground" would "give way beneath our feet" at every step.

Suppose I assert that *all fronds of the Mountain Buckler fern are erect.* The meaning of the assertion is fixed and definite, and if true, it is true once for all. Quite obviously, my outlook, location, state of health or temper, and so on, cannot affect its truth or meaning in any way. And if I go on to say that the fronds are, also, lance-shaped in form, pinnately divided, that the pinnæ stand opposite (generally), that they are narrow and tapering and are pinnatifidly divided—do any of these affirmations, or all of them, in the least alter or modify the meaning of my original statement that all the fronds are erect? It must be admitted that no one of them alters the meaning of any other; but what *is* very importantly modified is my knowledge of, and power of 'identifying,' the thing itself, the actual object in time and space, the Subject of Attributes to which all these successive characteristics are assigned. All the successive predicates are related as joint characteristics of the whole which they qualify; they are related not as modifying each other, but as modifying it.

Significant statements (which are always abstract in a sense already explained, a sense which does not exclude concreteness) may be perfectly true as far as they go, though they can never comprise perfect and complete truth about historical reality or any part of it. That the interior angles of an isosceles triangle are equal to two right-angles, is an abstract truth, the meaning of which is not affected by the further abstract truth that the angles at the base of an isosceles triangle are equal to each other, or that any triangle is half of a parallelogram. The meaning of the assertion, This is an engraving of a picture by Gainsborough, is not modified or changed by the further assertion, The picture is a portrait of Lady Mulgrave, it is one of the artist's masterpieces, it is supposed to be now in America.[1] But though any one of these statements does not alter or modify the meaning of the others, each one does modify the hearer's knowledge *concerning the object which is spoken of.* Or take the three propositions: (1) The book I am reading is *A Blind Bird's Nest;* (2) It is a charming story; (3) It is by Mary Findlater, who is a sister of Jane Helen Findlater. The meaning of (2) and (3) does not in any way modify the meaning of (1), but (2) and (3) do add to the knowledge about the book I am reading which was conveyed by (1).

[1] It became known last January (1908) that Gainsborough's portrait of Lady Mulgrave had been since the Price sale in M. Groult's collection in Paris.

Similarly in furnishing a room the carpet, curtains, tables, chairs, pictures, and so on, are *what they are*, but the addition of them *to the room* makes a profound difference to its appearance and comfort. Or suppose again that the walls of my room are papered with a "chrysanthemum pattern" paper,—full of pink, blue, and yellow tints, and that I cause a plain pink frieze to be replaced by a plain blue one but do not change the paper, the paper is still by supposition the same paper—the same in denotation and in intrinsic quality—but the room looks very different indeed. And so with, *e.g.*, the outlines and colouring in a picture—each line and touch is what it is, but the picture, the whole, is modified by each. Every individual, every thing, every part of the universe, is unique, and has inexhaustible qualities and relations, but in as far as it can become an object of knowledge, it must be determined by the attribution of general ideas.

And in the constructions of memory, imagination, and inference, the same holds good—the general ideas are like 'dressed' stones which may be put together without mortar or cement, and can be rearranged for one mental construction after another without suffering any intrinsic change. They are thus 'precisely identical' amid changes of relation and of circumstance which affect *not* the general ideas, *but* the subjects of attributes which they qualify. Similarly with, *e.g.*, the letters of the alphabet, the notes of the musical scale, arithmetical and mathematical symbols (as already observed).

Whatever is in time or space has, it would appear, important relations with all other things in time and space. Among the attributes of anything in the world must be relations of some sort to everything else in the world. Tennyson's apostrophe to the "flower in the crannied wall" seems to present this point of view —completeness and coherence of knowledge is the ideal here suggested to us, to which we may by degrees approximate more nearly, but which we are always indefinitely far from attaining. No one thing (part of the world) can be *completely* known unless everything else (all the rest of the world) is completely known; we cannot quite fully know a part without knowing the whole. But it is only by help of general ideas, common names, fixed connotations, clear definitions, that we can make any steps at all towards the complete fully-systematised historical knowledge which is our goal; we cannot know the whole without knowing the parts. We must begin from contact with this part or that of the vivid but bewildering fulness of reality, and the most extreme and (seemingly) artificial exercise of abstracting thought has, as its one purpose, the bringing of that rich reality into orderly and intelligible connexion.

It is interesting to observe that certain categories of connexion, *e.g.*, classing and classification, may be applied to concrete things without in any way altering the existence and intrinsic attributes

of those things (though with most potent effects from the point of view of thought and its connexions)—no interaction between the actual things, no change in them, no joining and no separating, is produced by ranking them as like and unlike—in fact, if it were so, the relation would be self-destructive. But the relation between (1) thought and knowledge and (2) the things classified is profoundly modified.—A South African lion is entirely unaffected by being classed with his Asiatic namesake and distinguished from the Cape 'tiger' (panther), though to bring about contiguity in space between two such co-existing individuals, is to introduce historical relations of vital importance for the creatures themselves.

A steady recognition of the difference between the two fundamentally important uses of Identity, Identical above discussed (which might perhaps be provisionally distinguished as (1) Historical, (2) Abstract), might perhaps do something towards clearing up past controversies and preventing misunderstandings. The dispute in recent numbers of MIND, for instance, on the nature of truth, might have light shed upon it if it were recognised that (as I suppose) it is the historical identical in the most extended sense, the whole to which qualifying attributions are made, on the predominant interest and importance of which Mr. Joachim is concerned to insist, while it is an abstract 'identical' that is the ideal which Mr. Russell and Mr. Moore seem to have in view—the fixed meaning of immutable abstract 'entities'.

E. E. C. JONES.

## INFINITE DIVISIBILITY.

Mr. Fullerton's extremely ingenious attempt in the October number of Mind to find a new solution to the old puzzles which have come down to us under Zeno's name leads me to think that he and perhaps many others would take some interest in another way of looking at the question.

It is not really an Ontological question. What we are considering is not the true inwardness or real nature of Space or Time, but only our notions or thoughts about them. We want to make our ideas appear consistent with themselves, and when we have done that we shall leave it to the Realist and the Idealist to settle their true meaning if they can.

What we have to do therefore is to avoid all confusion of thought, to distinguish all things which can be distinguished from one another, and with this I think most of the puzzles will disappear. I shall show how we may proceed in the case of space only, because, as Mr. Fullerton remarks, it is a waste of energy to go twice over the same ground.

The first distinction to make is between space and figure. Space is known to us as room to move, but figures are points, lines, surfaces or solids constructed or existing in space. We find space, but we construct figures, and all these puzzles consist in ingenious plans for making us attempt to construct space. Space has no dimensions. Dimension and direction belong to figures. The length of a figure is its size in one direction, but you cannot take the size of space in any direction, nor can you find in space anything to point in one direction rather than another. When we are told that space has three dimensions, an explanation is always given which amounts to what has been just said. We are directed to draw through a point three lines perpendicular to one another, and these we are to take for the three dimensions of space. In point of fact we have constructed a figure and we find that it has three dimensions. The three lines we have drawn explain one another and supply us with three directions in which to measure, but we can in no way attach them to space so as to qualify it.

Again, figures are finite and divisible; space is infinite and indivisible. Take the question of divisibility first. We divide anything when we separate one part of it from the rest. This can only be done by putting between the parts something different from either

of them. Thus a point will divide a line into two parts, a line will divide a surface and a surface will divide a solid, and we can divide a material thing such as a sheet of paper by cutting it in two and letting some space intervene between the parts, but a line drawn on the paper only divides the surface not the paper, and nothing which we can do on or with the paper in any way affects the space in which it exists. If it were possible to drive two nails into space and stretch a line between them it might be said that space was divided, or if anything which is not space could be inserted between two parts of space then it would be divided indeed, but as nothing of the kind can be done we say that space is indivisible as figure is divisible. And having said that, we have said that space is infinite but figures are finite, for that is infinite which cannot be increased or diminished, multiplied or divided. Where there is a division there is a boundary, and from what is divided something may be taken away, and to it something may be added, and thus all things divisible are finite.

In speaking thus, of course by infinity I mean true or Metaphysical infinity. Mathematical infinity is quite another idea and in its own place an extremely useful one, but we must not allow ourselves to confuse it with true infinity. It is unfortunate that two ideas so different in themselves should have the same name, but we must take things as we find them, and notwithstanding the difficulty thus caused endeavour to keep our thoughts clear. Mathematical infinity is an endless progression and may be represented as a line stretching onwards without limit, or a number increasing without end. It is a construction, a sort of figure, and the line is looked upon as always being drawn onwards, the series of numbers as always growing, and hence what is Mathematically infinite is Metaphysically finite, since, however far the line may have progressed it may go farther, and however great the number may be it can be made greater.

Now a line is, in the Mathematical sense, infinitely divisible, but is not infinitely divided. To draw a line is to construct a figure; to bisect it when drawn is to construct another figure, but the line has not two parts until it has been bisected, or three parts until it has been trisected. If, as Mr. Fullerton suggests, it were necessary to suppose the parts to be there before I make them, it would be equally necessary to suppose the line to exist before I draw it, and everything else that I do to be done before I do it. The line is capable of having parts, but it has none; it is only one thing until I divide it, and it is capable of being divided without limit, because the process of constructing figures by cutting off smaller and smaller portions is one which gives us no idea as to how it might be made to end.

Mathematicians are in the habit of considering a line to be equivalent to a row of points, and for some purposes this is perfectly satisfactory, but for other purposes it is only an approximation, and

for Metaphysics it is absolutely false. As a Mathematician, I say that a line is composed of an infinite number of points; as a Metaphysician, I say that a row of points differs from a line as much as a circle does from a triangle. When I am discussing a Metaphysical question, I must keep to the Metaphysical way of looking at things and consider the line to be the continuous course marked out or passed over by a moving body. If the body moved by jerks, the line might be considered to have parts marked out by the beginning of each jerk, but if the motion is continuous, the line is continuous and not divided, although capable of division, not containing points, although affording a means of distinguishing positions or points. Points, to the Metaphysician, are only positions which must be distinguished or defined by reference to other figures, but which cannot be made to combine because they have no magnitude. Mathematicians add points to points to make lines, and lines to lines to make surfaces, but then the point must be regarded as a small surface obtained by division of a larger surface progressing without limit. From a Mathematician's point of view such a surface differs in no way from a point; to a Metaphysician they are absolutely distinct.

I have called these ideas Metaphysical and Mathematical, but they are evidently part of the furniture of the human mind, easily developed by any one who thinks, but very easily confounded. Zeno's puzzles rest on such confusion, and when it is avoided the difficulty vanishes.

J. N. Shearman.

## VI.—CRITICAL NOTICES.

*Philosophische Voraussetzungen der exakten Naturwissenschaften.* Von Dr. Erich Becher, Privatdozent der Philosophie an der Universität Bonn. Leipzig: Johann Ambrosius Barth, 1907. Pp. vii., 244.

Described as a defence of "atomistic and kinetic realism" against the attacks of a "radically positivist" theory of knowledge, Dr. Becher's careful and excellent work suggests the beginning of a new change in the meanings of philosophical terms. For the "realism" he upholds is not incompatible with that which in English thought has been known as idealism; and the "positivism" he opposes is an extreme phenomenism in comparison with which, as he observes himself, the positivism of Comte involves a whole-hearted acceptance of traditional hypotheses. The typical representatives of the new doctrine are Ostwald and Mach. Its aim is understood to be the elimination of every assertion about anything but actual sense-perceptions. Science indeed is still allowed the equivalents of the old "hypotheses"; but they are to be regarded as no more than useful "fictions". The representation, for example, of matter as atomic in structure, and the accounts given of the transformations of energy in terms of the motion of particles, cease for the new chemistry and physics to be anything but mathematical devices to facilitate calculation. An ideal science of "energetics" would dispense with all imaginary mechanism, and simply state that one kind of "energy" (heat, light, electricity, etc.) under given perceived conditions substitutes itself for another; no attempt being made at picturing the process to which this substitution corresponds. As those who have put forward the best-known expressions of the new doctrine are men of science, their positions cannot well be ignored in relation to scientific thought. It is in a scientific rather than in a metaphysical interest that Dr. Becher has submitted them to a judicial examination.

First he contends for the theoretical validity of hypotheses in general. By hypotheses are to be understood assumptions we may justifiably look forward to proving true or probable, or at the very least, possible. With a "fiction," the question of truth does not come in. The question is only whether it serves its purpose as a device for "economising" thought. How then does the hypothesis stand that there is an external world? For it is

the admission of a real external world that the "positivists" oppose. The dialectical case in their favour is skilfully put. The modern mechanical doctrine, it is first pointed out, has its foundation in the denial that the "secondary qualities" of matter are really in things. The primary qualities, the author goes on to show, are equally subjective. Extension has no claim to a reality that is denied to colour or sound. Touch cannot maintain itself as unquestionably corresponding to reality any more than sight; for it too is liable to illusions. To what quality of sense, tangible or visible, do the supposed real extended objects correspond? Between the "spaces" of the different kinds of sense it is impossible to decide. Is not the subjectivity of extension, then, in the end fatal to the mechanical doctrine, which seems to assert a known external cause of our perceptions?

In seeking a way of return from this revolutionary outlook, as he takes it to be for science, Dr. Becher first observes that by the phenomenists the immediate certainty of the given is not contested. From this in itself, however, he does not attempt to derive anything. On the contrary, his method is to show that for effective knowledge nothing can be got from it without a series of assumptions. For knowledge, in short, "we have to assume, what can be doubted" (p. 66). Beyond immediately given phenomena, it is true, we have unconditional certainty in the logical axioms (laws of thought) and in the forms of inference of analytical judgments: and this class of certainties too is not contested by the opponents of hypotheses. From what they admit to be immediately certain, however, he fully allows that nothing can be got by mere formal thinking thus regulated. Only with the next assumption do we make any real advance; and this is something that is not incontestable. We assume, but cannot deduce from anything else if it is not granted, that memory refers to an actual past. For life, knowledge of the future is even more necessary than knowledge of the past; and this requires additional presuppositions. We have to presuppose that there is a future, and that inductions are valid for it. The presupposition involved in induction cannot be demonstrated to any one who does not accept it. Those who argue against the existence of the external world, however, agree in the recognition of inductions so far as they apply to our own past and future consciousness; and they do not stop even here. As we have filled up gaps in the series of perceived events in order to bring the succession of our own states to regularity, we try to fill up the gaps that remain by assuming consciousness that is not our own. The validity of this induction too is allowed by opponents of the external world. By this hypothesis the regularity of events is made more complete; but it is not yet free from gaps. Sense-perceptions mostly break into the streams of consciousness of men and animals without apparent determination by uniform law in relation to the preceding contents of their consciousness.

Now the "external world" means for us the sum of antecedents we have to assume outside these various "streams". It is only one more assumption. It fits into the system formed by the previous assumptions; all of which, though not deducible from one another, are at any rate compatible: and it is so completely verified that its worst enemy cannot do without it in daily life. If it were only a "fiction," it could fully maintain itself on the ground of adaptation to purposes; but is it not more than a fiction? Is it not the most probable hypothesis?

As Dr. Becher foresees, the objection of opponents here will be, Is there, after all, any meaning in the assertion that there are external things in the realist's sense? Is there a definable non-phenomenal reality in the external world as such? So far as the world outside means simply a kind of regularity not dependent on us, but on which we depend, all admit it. The idealist assigns the ultimate explanation of it to a metaphysics of mind, but has no quarrel with scientific physics. Against this line of reply, partially expressed in Mill's definition of matter as consisting in "permanent possibilities of sensation," Dr. Becher puts the alternative: If the "possibilities" are permanent existences, they form an external world; if they are only in our representation and not outside our consciousness, they are not antecedents, and cannot satisfy the need of regularity (p. 80 note). Now this undoubtedly points to something beyond Mill, who stopped short of a theory of reality. According to the constructive idealist, the only way of giving reality to the "possibilities" is by a doctrine for which they have themselves something of the nature of mind. What are possibilities of sensation, regarded relatively to the phenomenal sequence of events, metaphysically stand for portions of an order that is in its own nature mental. Dr. Becher reserves the metaphysical question as to the constitution of reality as a whole; but, so far as he goes beyond Mill's position, his doctrine is not a return to the realism opposed by Mill or by Berkeley. He is a "realist" in a sense different from that of Berkeley's idealism only in so far as he recognises a sum of being not to be exhausted by all that could be said about the experiences, as Berkeley would have expressed it, of "spirits," whether divine or human or those of animals. Any notion we can form regarding the essence of the external world, must be taken, he admits, from consciousness. To say of anything that it "exists" can only mean that it has so much in common with the contents of my consciousness that if it were present to it it would be designated as "conscious" (p. 86). Existence is "quality," and conscious quality; but qualities non-existent in men and animals exist no doubt in the external world, and their modes of combination must be supposed different from that of the consciousness known to us.

The type of theory will present itself more distinctly on further exposition. First of all, there are in the external world existences

that are relatively perdurable; at any rate much more perdurable than our perceptions of them usually are (p. 102). Besides relatively perdurable existences, there are changes. In accordance with the presupposition of regularity, these are held to be "causal," in Hume's and Mill's sense of the term. That is to say, they are in fixed relations to antecedents. Also there are in the external world differences, both of the successive and of the simultaneous order. There is no ground for supposing the real external world to be spatial; but with the spatial differences of our manifold perceptions differences in the external world must be co-ordinated. To the different kinds of sense-groupings for sight and touch, since these associate themselves in the same order, there can be only one external world to correspond. Time, unlike space, the author would himself regard as "objective"; on the ground that to recognise "antecedents" presupposes their existence in a real order of succession. Besides difference, there is likeness between existences in the external world; and, especially in consequence of this, arithmetic is applicable to it. Perdurability and change, causality, difference and likeness are expressions of relations; hence knowledge of the external world is relative. If, however, the author's view be accepted as to the "objectivity" of time, knowledge of it, he concedes, both as concerning the external world and our own consciousness, must be called in a sense absolute (p. 114).

Bodies are to be asserted as something space-filling and perdurable; but this is said with the qualification made above in regard to space-relations. There is something corresponding to our conception, but this is not body as it appears. The result of a discussion of "substance" is that it has no intelligible sense as distinguished from all qualities, but may have one if taken to mean perdurable quality (p. 130). For the man of science, the substantial kernel is the tangible (p. 122).

From this point, we naturally proceed to the hypotheses of mechanical physics, which the author defends essentially on phenomenal grounds. To follow out any hint given of a metaphysical position is here, as he explains, no part of his object. While making it clear that the mechanical view is not necessarily a corpuscular one, he nevertheless devotes his chief care to the grounds of the corpuscular hypothesis, since this is the basis of modern physics. He has no difficulty in showing that the positions of physics and chemistry regarding hidden composition and movement are prepared for by verifiable inferences in practical life. Grained structure not at first obvious may be rendered visible and tangible; and perceptible vibrations may be made to combine and apparently pass into something that is not vibration. For the results of reasonings that are merely a prolongation of such common-sense inferences, the name of "fictions" is not the right one. There is no doubt an element of fiction in the models by which we represent the structure of matter; but the hypothesis that it has a

structure is not therefore to be regarded as wholly a fictitious imagination. Much that can be said about this structure ought to be called "probable hypothesis". The limits, indeed, of physical and chemical hypotheses have to be recognised. The mechanical doctrine works with the idea of masses in motion; but it must not be taken to assert that no qualities of elements save those that are thus expressed exist in the nature of things. The modern atomic theory does not, like the ancient, assert the absolute indivisibility of its elements. The chemical atoms have been proved to be only relatively indivisible; and the fate of the earlier atomic theory ought to warn us against supposing that we may reach a limit in the notion, for example, that the "electrons" now said to compose them are ultimate. The prospect opened out before science is an indefinite resolution of structure into something more minute. Again, the elements of matter undoubtedly fall into groups consisting of approximately like units; but it is compatible with the facts to suppose these units as much different individually as animals of the same species. Perhaps no two ultimate elements—if such exist—are absolutely alike. Empty space, the presupposition of the ancient atomic theory, is no necessary part of the new one. The discussions started on the question of "action at a distance" are still far from being scientifically resolved; and here least of all is dogmatism in place.

In all this, the exaggeration of phenomenism that would identify hypothesis with fiction seems to be fairly met. Imaginations of minute structure are within limits capable of direct verification; and even beyond these limits they are quite intelligible, and conceivably correspond to what might be seen or felt if our perceptions were magnified. This supposition, though Dr. Becher does not bring it out so distinctly as some idealists might desire, is itself purely phenomenal. Because a physical hypothesis does not give us metaphysical reality it is not therefore mere fiction. But how does it stand with the properly "realistic" part of his doctrine? Can we determine to any extent the ultimate "qualities" that make up the real external world? Do the most recent developments of physics bring us any nearer to determining them? Here the author takes a decidedly sober view. He gives a clear account of the new "kinetic-electric" as distinguished from the old "kinetic-elastic" theory of the transference of motion, following this up by discussions on ether and "action at a distance"; but has no determinate conclusion to offer. What he has to suggest in the end is a recurrence to possibilities when probabilities are no longer attainable.

A question he does not definitely raise is whether there are not limits psychologically assignable to the explanatory power of physics. May it not be that the properly "mechanical" doctrine is less capable of being transcended on the physical side than is supposed in some recent scientific speculations? Dr. Becher him-

self seems inclined to admit that some formulated conception of an "electron" can supply us with an explanation of "mass". Does not the nature of our senses show the impossibility of this? The electron seems unimaginable except as a small mass with an electric charge. Its "motion" cannot be anything but the motion, in the sense of transference, of such a mass. Thus it does not bring us to anything pre-mechanical. In physics, we cannot get beyond manipulating data of sense in an imaginative form; and the conditions of imaginability depend on our actual senses. Now a particle, of whatever kind, is an imagined object of sight and touch. As we have no special electrical sense, we cannot directly imagine in terms of electricity. Fundamentally, we are not carried beyond mechanicism as a scientific ideal.

To say this is to reinforce Dr. Becher's general position; for his principal aim is to insist on the element of permanent scientific truth in mechanicism. Of the limitations of this he shows himself fully aware. What he sets himself to defend is "mechanical physics" as a system of verifiable hypotheses; not a "mechanical view of the world" aiming at an ultimate explanation of life and mind. His philosophical doctrine, as has been said, presents itself as a kind of idealism. All knowledge, he perceives, has to be constructed rationally from a subjective base. There may be some interest in a concluding remark suggested by the order he gives for the series of presuppositions by which we construct it. As was seen, he finds that from the immediate data of consciousness we go on to reconstitution of our own past; then to prediction of the future on the ground of induction; then to belief in other streams of consciousness besides our own; and lastly to belief in an external world (whatever its reality may be). This is clearly the rational order from the idealistic point of view. Is not the historical order just the opposite? First, for human as no doubt also for animal consciousness, the feeling of resistance to effort suggests an external object; a little after this in development, though probably almost simultaneous, is the vague notion of other animated beings; next comes inductive inference to the future, with a practical aim; later, memories are referred to a determinate past (a more speculative problem, as Dr. Becher observes); last of all, the attempt is made to set "pure experience" free from all the assumptions and inferences involved in practical and scientific knowledge.

T. WHITTAKER.

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*L'Évolution Créatrice*, par HENRI BERGSON, Membre de l'Institut, Professeur au Collège de France. Paris: F. Alcan, 1907. Pp. viii, 399.

A FRENCH critic has said of Prof. Bergson with some justice that it is inept to argue with him: you are either a Bergsonian or you

are not, and that is the end of the matter. For Bergson does not argue, or at any rate he argues only to refute and not in direct support of his own views, which he simply states with great eloquence and much wealth of metaphor. It is an unsatisfactory method. Not to give one's reasons is an excellent maxim for practice, but unsuitable to philosophy. The appeal is made to inner experience, and inner experience, unless it be very strictly cross-questioned, is like those polite but dangerous people who always tell us what they think it will please us to believe. Admirable as literature, the construction of this treatise is philosophically defective, and it becomes difficult for one who is not convinced of the value of all its main positions to disentangle the many subsidiary truths which are really valuable as well as beautifully expressed. And yet, when all is said, of all the blows aimed in recent years against the unhappy human intelligence—once so presumptuous and now so sorely discredited —Bergson's is, perhaps, the most forcible. The following analysis will give some idea of the purpose of the book.

The history of evolution teaches us that the human understanding has been developed as an annex of the faculty of action. Hence it is excellently adapted to think matter, but is incapable of comprehending life, of which it is but one among many emanations. The categories of our thought are suited to "solids," and science, so far as it deals with the inorganic, is more than symbolical and touches the actual; but these same categories are inadequate to life. The theory of life, therefore, needs a theory of knowledge to protect itself against the false claims of the understanding, whilst the theory of knowledge needs the theory of life to show the place of the understanding in the history of evolution. This theme of the inadequacy of thought to life, briefly stated in the Introduction, is more fully developed in the course of the book.

Chapters i. and ii. deal with the evolution of life and with current attempts at explanation of it. The fundamental contrast for Bergson is not between mind and matter, but between animate and inanimate, organic and inorganic. Our being is continuous change: duration, continuous process in time is of our essence. Each moment of our lives is a unique moment in a unique irreversible history, and so is an incalculable *creation*. The existence of conscious beings is a continuous process of self-creation. But the changes of material objects, at any rate within the closed systems isolated by science, are calculable beforehand; they can be repeated in time but they have no history; *i.e.*, time makes no difference to the inanimate. This is not true of the Whole, however,—it endures and progresses—nor is it true of living bodies, which are systems closed by nature and not by our artifice. They are individuals, and individuality comes from life; time affects them, for they grow and grow old. They must, therefore, be classed with the Whole and with consciousness, and not with inanimate matter.

Life, then, is creation, and the development of life resembles the

development of a consciousness: it is continuous, the result is incommensurable with its antecedents, the series is irreversible. But this is not recognised by those who attempt to explain evolution on the lines of either mechanism or finalism. We must accept the fact of transformation, but we cannot explain it either mechanically or teleologically. The mechanical theory is evidently inapplicable to a process of creation, for it assumes that all is given or calculable, that nothing really new occurs, that time has no efficacy. But teleology, if it means that evolution is the execution of a ready-made plan, involves the same assumptions, whilst if, as with some neo-vitalists, it means that each living being executes an immanent plan, it shatters on the fact that gross organisms are complexes of smaller. This criticism the author illustrates with great skill in reference to the special problem of the eye, asking how it comes that vision has been developed on two divergent lines of evolution, such as those of molluscs and of vertebrates, and arguing very forcibly that none of the current theories is able to answer the question. At the same time he admits that the Neo-Darwinians are most probably right in placing the cause of variations within the germ and not in the behaviour of the individual, though wrong in supposing germinal differences to be purely accidental; whilst Eimer is right in maintaining that variation is in determinate directions, though wrong in assigning only physico-chemical causes; and lastly the Neo-Lamarckians are right in believing the cause of orthogenesis to be psychical in nature, but wrong in assimilating it so closely to our individual effort. A profounder effort is involved, the single effort of life, or, as Bergson calls it, the *élan vital*. This life-impulse does not indeed aim at represented ends, but it has a direction, not calculable beforehand, but recognisable *post factum*, and inexplicable on any mechanical theory. So long as we regard only the complex structure, we cannot explain the analogous character of the eye of vertebrates and molluscs, but the function of vision is simple and not complex, and the complexity of the structure represents, not means employed by life in its "*marche à la vision*," but obstacles overpassed. "Life is before all a tendency to act on brute matter," and to be efficacious vision, like all perception, must be "canalised," so that the similarity of the structure occurring along divergent lines of development expresses a similar degree of attainment of the function.

But is this *élan vital* more than a name for a problem? Can we say anything positive of it? The author answers that if development has been along divergent lines, then the possibility of these divergences must have belonged to the original impulse, so that its character may be partly divined by taking a synoptic view of its actual developments. Just as the child contains the possibility of many men, so life at first contained the possibility of many directions, but unlike the child it has not been confined to realising only one of them. Its tendencies were from the first in unstable equili-

brium; it was like an explosive force, and it had to meet a resisting matter. The primal tendency was to grow, but living matter soon reaches the limits of growth and duplicates itself: hence the fragmentation of life into species and individuals. It is the business of philosophy (and the problem is philosophical and not scientific) to determine and appreciate the various tendencies of life, and combining them to get an idea of the "indivisible motive principle from which their *élan* proceeded". A complete interpretation, however, presupposes a complete natural history, and Bergson does not pretend to do more than sketch the general outlines of the scheme.

Life being creative involves an effort to graft upon the world of inorganic necessity the greatest possible amount of indetermination. But the life-impulse cannot create natural energy, and therefore has to use the potential energy of matter. To do this, it must form, so to speak, store-houses of explosives, of which plants are the purest examples. Yet in plants the life-impulse has side-tracked itself. It would store energy only with a view to active expenditure; but in plants the storing function has outrun the active function. And the same tendency to immobility shows itself also, though to a less extent, in the animal kingdom, for the life-force is limited and always inadequate to its task—always in danger of becoming stereotyped by its materialisations. It aims at the maximum of activity, but living beings aim at the least effort. Hence the tendency of species to become fixed, and the infrequency of continued advance. If the criterion of advance is success in developing despite all obstacles, then it is found only in two lines of development, that of the arthropods culminating in the hymenoptera and that of the vertebrates culminating in man—*i.e.*, on the route of developing instinct and on the route of developing intelligence. Vegetative torpor, therefore, instinct and intelligence are three elements which were in some sense united in the original impulsion and became dissociated as it grew; and it has been a fundamental error of all philosophy since Aristotle to regard them as successive stages of development, when they are really divergent directions of life.

Here we are launched upon a novel and important comparison of instinct and intelligence. Neither is ever found pure, for the dissociation of primal tendencies is never complete; but they are radically different in kind. Instinct, being at bottom one with the organising activity of living matter, is the faculty of using organs as tools, and even of making these organic tools. Intelligence is the function of a creature that has to manufacture its tools out of inorganic matter. Instinct deals with things and, if conscious, is so by accident; intellectual knowledge is of relations, and is essentially conscious. Its aim being the fabrication of material tools, intelligence is best adapted to deal with the solid, extended, and inorganic. Even here it subordinates accuracy of conception to practical utility, for extension is continuous, but we break it up into discontinuous fragments; solids are in constant movement, but we are interested

only in their positions, present or future, and have a clear conception only of immobility; and we are not interested in the actual forms of things, but in the possibility of decomposing and recomposing them as we will. But when it turns to the inner world or to any process of life our thought becomes totally incompetent; its stable concepts, its discontinuous form, are inadequate to continuous change. Hence intelligence cannot understand instinct. Science may translate instinctive behaviour into terms of intelligence, but those terms remain merely symbolic. Yet it is not altogether impossible to apprehend the nature of life. Intelligence cannot do it, but it alone can prompt us to the attempt, so that in a sense we could not do it without intelligence. What is needed is intuition such as belongs to the æsthetic faculty, but not, like the æsthetic faculty, confined to the individual. Such intuition, though it would not give us scientific knowledge, would grasp what science misses.

Life then is a psychical principle—not conscious volition, but more resembling a kind of effort or impulse, though no term of the ordinary psychological vocabulary is quite suitable to it; and (chapter iii.) the material world, though in one sense an obstacle resisting life, is in another sense its necessary means. If the law of degradation of energy holds good, then life may be regarded as an attempt to retard degradation by accumulation of energy, and only through this accumulation can it find actual expression. But after all the material world as we perceive and conceive it—ordered, spatialised—is not positive. The contours of the inanimate things that we perceive are the tracings of our possible movements; the spatial complexity and co-ordination of the world as science conceives it are the work of the intelligence. The Whole is really a flux, a becoming. But the intelligence cannot comprehend becoming or efficacious time, and materiality corresponds to privation of time. As spirit grows more intellectual, matter grows more material. The physical order and intelligence itself, therefore, are an arrest or inversion of the positive, forward-marching, order. The mechanism of our knowledge is cinematographic; we perceive and conceive matter as consisting of bodies possessing states and qualities, and then if we try to arrive at a reconstruction of movement, it is by taking a rapid series of instantaneous views. This is the only practical method, because our action is discontinuous, but when we pass from the world of possible action to the Whole, the stable spatial order vanishes, relapsing into the original flux, which is not disorder, but an order other than intellectual.

This dry analysis does no justice either to the author's facility in simile and metaphor or to his unusual power of combining excellence of style with extreme compression, but it will perhaps have made clear the general trend of the argument. To a layman, the criticism of biological assumptions appears to be a very successful summary and extension of criticisms which biologists themselves have increasingly felt and expressed in recent years. But the positive doctrines

of the book are less convincing. The author has been misled in the first place into the common view that language (and therefore thought) was directed primarily to material things, and has only later, by a process of torture, been applied to the spiritual. But this is a mistake. While material and spiritual are still undistinguished, attention cannot be directed more to the one than to the other, and when the distinction has been drawn, the limitations of language are not confined to one side: if it is true that many terms now applied to the psychical have been drawn from the physical, it is no less true, *e.g.*, that at the base of the meaning of every active verb is a peculiarly psychical experience. Surely the history of science and philosophy makes it plain that so far from the intelligence having been from the first directed and adapted solely to matter, physical science has had a constant struggle to rid itself of persistent modes of thought unsuited to matter.

Nor do I think that Bergson's view of the relation of instinct to intelligence is likely to win much acceptance. It is doubtless true that not all instinctive behaviour develops or can develop in the direction of intelligence, and it is not unfair to say that the passage from the one to the other has never been satisfactorily traced. Perhaps it cannot be traced now, but it would be still more difficult to trace the development of intelligence by itself, excluding all instinctive sources. It is not enough to say, as Bergson does, that instinct and intelligence co-exist: they interpenetrate and modify one another. Is perception an instinctive or an intellectual function? Surely it is always both, or sometimes one and sometimes the other, as one likes to put it; in other words the distinction is clear only in relatively extreme cases, and is not a distinction of ultimately opposed tendencies. Much the same holds good of the opposition of intelligence and intuition: though, no doubt, the scientific attitude may be fostered at the expense of the æsthetic (to which Bergson assimilates intuition), yet you do not make a man an artist by neglecting his education or increase his powers of appreciation by forbidding him to think.

Still more strange is the idea that in intelligence we have an arrest of the creative process, as if conceptual thinking had no volitional character. How can it be at once a primal tendency of life and an interruption of the life-order? Nor is it less obscure how the intelligence ever *touche quelque chose de l'absolu* if it is adapted only to the material order and the material order is not positive but a privation. Nor again am I easily convinced that the contours of Table Mountain or of the crystals that, as I watch them grow, take these or those determinate forms are merely the lines of my possible movements, though that is certainly part of the truth about them.

Lastly as to the inadequacy of thought to life. The argument that thought being a creation of life cannot understand life would have force, if at all, only supposing our knowledge that thought is a creation of life either is not intellectual or at any rate is not gained

by intellectual means (for otherwise the argument depends on what it proceeds to condemn), and supposing the conception of intelligence as an arrest of the movement of life to be valid. That life means creation, that therefore it does not admit of accurate calculation and prediction, is not reducible to rule, cannot as a whole be explained on the lines of mechanical theory,—all this Bergson shows forcibly and conclusively. But that therefore the movement of life is unthinkable he shows neither by argument nor by action, for indeed he thinks and says a great deal about it. That his language is so largely metaphorical does not lessen this difficulty, for even an unintelligible metaphor is a product of intelligence, and Bergson's metaphors, though frequently misleading and evasive of important problems, are not unintelligible. The plausibility of his view depends greatly on neglect of the intellectual element in perception, for at least we can perceive movement in the external world and, however we choose to name the process, we can apprehend our own volitional activity; and the terms movement and volition have a meaning, which is surely intellectual. After all physical science is not the only form of intelligence. But at the root of Bergson's polemic against thought is a demand which he does not express. He wants thought not merely to know but to *be* its object, and because it falls short of this he rounds and rends it, and calls it an arrest of the creative process.

On the difficulties raised by the conception of the Whole as a Flux it is unnecessary to dwell.

T. Loveday.

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*Vorlesungen zur Einführung in die Experimentelle Pädagogik.* Von Ernst Meumann, Professor of Philosophy, Münster i. W. Leipsic: Engelmann, 1907. Vol. i., pp. xii, 555.

This, with its companion volume, not yet received, will, in all probability, form the best summary of the aims and achievements of experimental pedagogy in any European language, and cannot fail to be of the very greatest service to all earnest students, both of Education and Psychology. That it is written by a Professor of Philosophy appears to indicate that Germany, though little influenced in theory, has been to some extent guided in action by the present world-wave of pragmatism or practical philosophy. Prof. Meumann, whose contributions to pedagogical science, largely hitherto in periodical form, are so well known to all serious students throughout the world, is now publishing in two volumes a number of lectures which will give a general account of the work done. When one has been oscillating between two conflicting desires, on the one hand to summarise the work already done, on the other hand to pursue researches of one's own, and has finally chosen the latter course, it is a source of the greatest pleasure to find the former task undertaken by one who is an acknowledged master.

There is no name that stands higher than the author's in work of this kind, and, were the English educational public advanced enough, the translation of this work would be profitable to the publisher as well as to the cause of educational science. Pending such a state of things one must do one's best to bring these lectures at least into academic notice.

Able men resident in universities are very suspicious of what is known s Child-Study. They describe it as pseudo-science—a collection of observations with lax methods by untrained observers who are prone to sentimental conclusions. It is only by work like that of the author that such opinions can be successfully combated; there is too much ground at present for such accusations. Prof. Meumann himself sometimes utters the mild reproof, A's or B's work "ist nicht sehr genau".

One more general consideration of interest—the lectures were delivered to the members of Teachers' Trade Unions in Königsberg, Bremen and Frankfort. It seems hard to conceive the members of teachers' unions in England inviting and attending such lectures.

Prof. Meumann explains, in a carefully written preface, that his book is an introduction in popular form to those pedagogical problems about which decisions are to be sought by experimental methods. It is not, he explains, a systematic pedagogy, not a system of knowledge. It is too early to set out a systematic pedagogy on the results obtained up to the present, and, the author continues, we ought not to attempt to do it; for we should be running contrary to the spirit of empirical research if we helped ourselves out with guesses and hypotheses. Yet he inclines to think that, before very long, such an attempt will be justified when a number of fundamental experiments now proceeding have been finished. The researcher always wants us to wait; when we get his results we shall be safe, he thinks: the systematiser always wants to systematise at once and points out, often truly enough, that the researches, though relevant, are little things. It seems to me that both workers may well proceed side by side, for we cannot hope for more than a transitory finality, if such an expression is permissible.

But whether this position be sound or not, we may at least agree with Prof. Meumann that Pedagogy, after a hundred years' neglect, has at last entered the scientific stage, but only entered, at least so far as England is concerned; it is not even yet a determining factor in English appointments in Education. We can hardly repeat for England Prof. Meumann's dictum that experiment *ist die Signatur der Pädagogik unserer Tage.* Unhappy indeed, he says, has been the fate of Educational Theory. It has been the chosen field of the dilettante and of the self-educated person. Of philosophers also; but of these, Locke, Leibniz, Kant, and he might have added Spencer, how many had in any way prepared themselves to deal with the subject on which they made such con-

fident assertions? It will not be by mere asseveration that Education will become a science, nor by the occasional divagations of men of science whose knowledge, say, is of physics or biology, and whose attitude is admirably satirised in the opening pages of Mr. Wells' *Food of the Gods*. But I am not quite sure that I am wholly in agreement with the author. He does seem to me too ready at times to set aside the philosophers and logicians to whom we owe whatever of rationalised work is now to be found in educational theory. All relevant ideas should be welcomed, doubtless, as provisional only; but, as there is no timeless or timeful eternity of truth for education, their provisional nature is not fatal. And it must never be forgotten that psychology, however experimental, cannot give us educational ideals.

How can physiology and what Prof. Meumann calls the external statistical method help us in all these inquiries?

We want help from whatever side it is offered, but there are difficulties which must not be burked. We can talk, if we wish, in terms of physiology, of cells and association fibres, and every effort should be made to find true parallels in the happenings of psychology and physiology. As long as we recognise that our talk is largely analogical and inferential, and that anatomical and physiological knowledge is not adequate to give solutions on pyschological points otherwise unknown, we are safe. How can we, for example, establish correlation values between a definite neural centre and a definite mental activity (p. 34)? We hardly, if ever, have but one of the two series before us in any definiteness; we may talk as much as we please of centres of this and that; but their physical growth in human beings is not separately observable in detail; in reality we always actually appeal to psychology, that is, to the mental activities in operation.

Unlike many experimentalists, the author fully recognises the unwisdom of piling up statistical masses of apparent evidence without, as a preliminary, striving to obtain a full and clear conception of the psychological units involved, that is, without a thoroughgoing analysis. He lays great stress on introspection, particularly in the discussion of the various forms of Association (pp. 218, 219). He thinks that the neglect of the inner connexions accounts for the conflicting nature of the results obtained by external statistical methods. Indeed he goes further than I should care to go in saying that a purely external method "hat gar keinen Wert"; perhaps because I hardly think any one can use, or has used, a method purely external.

A second chapter deals in outline with the general tasks of experimental pedagogy. It must ascertain the bodily and mental development of the child during the whole of school life; this knowledge provides us with one set of determining factors in Education, though it is hardly "das Fundament der ganzen Pädagogik". It involves a knowledge of the rates of development with varying ages and of

the correlations between bodily and mental growth. We shall thus definitely rid ourselves of the conception current in older pedagogy that the child is merely an adult on a smaller scale. We must study, too, the growth in the separate functions of perception, ideation, memory and thought, treating not of the child merely, but of the school-child, the child working in the school. Then we must deal with the economics of school work—how to produce the greatest result with the smallest outlay of teaching; and finally, with the relations between work done at home and in the school.

A third chapter traces the general bodily and mental development of children, and the fourth, fifth, sixth and seventh chapters treat of the development of the separable mental activities in children. These chapters constitute both in bulk and importance a very integral part of this volume. It is impossible in a short review to deal with all the excellent work here quoted and summarised; but I can hardly pass on without one or two references in more detail. The treatment of Memory is full and clear, but some of the experimental workers quoted have mixed up classes of pupils in very different stages of mental proficiency; and some of the results are very doubtful. The fourteenth and fifteenth years are said to be relatively weak for memory and the ages between ten and twelve the best. These are Russian results. It seems ungenerous, when one has learnt so much from a book, to suggest that it might contain more, but the omission of all reference to the work of the Chicago Bureau of Pedagogical Research is regrettable. There are points, notably those concerning the growth of memory with age and ability, on which the Chicago results would have been very relevant. Moreover, they would yield valuable corroboration, on a wide scale, of the author's own conclusions. The Chicago workers find no special memory age, but a gradual rise in mnemonic power with age and ability.

The whole of this chapter on memory is very valuable just now, when it is customary in scholastic circles to despise memory as a very Cinderella of the faculties. The phrase is, I think, Prof. Thorndike's and is very apposite, except that this Cinderella has few set tasks given her to perform. Prof. Meumann asserts, and I heartily agree, that the positive relation between memory and general mental proficiency is very striking (auffallende). He speaks very critically of the opinion that the child's memory is superior to the adult's; the child requires more time and more repetitions than the adult, he says. There is, of course, a falling off, after maturity, in the power to learn new and disconnected facts; but this incapacity must not be regarded as a characteristic of anything except the commencement of the disabilities of age. Shall we trust then to pure time and space memories when we can get our work done with understanding? Certainly not, yet we do not say that the child must be taught nothing he cannot understand. Must we postpone subtraction till he can understand the general mathe-

matical principles underlying it? Must we postpone Shakespeare till he knows all the meaning of the words? Prof. Meumann rightly moderates these extremists, quoting Pestalozzi, "Man muss nur nie denken, weil das Kind von etwas nicht alles versteht, so dient ihm gar nichts davon" (p. 265).

In the next chapter there is a discussion of the vexed question as to Association by Contiguity and Similarity (pp. 216, 217). I can scarcely think that German teachers are so competent psychologically, that accounts of this sort are really helpful to them. In another place the critical remarks on some nomenclature of Ziehen's may be more confusing than helpful. They can hardly be lucid to teachers, I should suppose, unless more copiously illustrated. The illustrations indeed constitute the science just as truly as the conclusions do. And, perhaps, it may be appropriate to venture to express a thought which, though mainly subconscious, has been surging up in my mind from time to time whilst reading this big book. Why not begin educational psychology with teachers, not by means of lectures, but with the simple experiments of the schoolroom? The teacher's object is not the acquirement of psychology as a critical body of doctrine but as an experimental study of his own school problems.

Then the author deals with individual differences in school children. What we want to know, now, however, is not so much the minute differences between individuals, as what is true generally. I have myself been referred to as a person who wants each child taught separately—one child one teacher—according to his mental make-up, which, as is truly said, is not quite like that of any other child; and I believe the day will come when we shall make a mental diagnosis of children entering school, and at other times, and base our classifications thereupon. But at present, at least, we want to know more especially what is true for groups and classes normally constituted.

Educational legislation and educational therapeutics must be based on science, that is, on general truths, not on idiosyncrasies; and for us, not merely on normal groups, but on normal English groups. For there is one *caveat* which I must give to Englishmen who, I hope, will read this book. In default of published English work there has been a strong tendency here to adapt our educational methods to the psychology of German school children. This has been noticeably so in the uncritical adoption of the German conclusions as to mental fatigue. There is no reason for us to adopt the alarmist tone displayed by some, at least, of the German researches. Our results, and, be it said, Prof. Thorndike's in America, are quite different; mental overpressure with us is practically non-existent, at least, in elementary schools; I can speak with no confidence as to secondary schools. There is no doubt at all that this is not the only German conclusion which is not applicable to our own schools.

There is no word in matters scholastic which is used more readily by inspectors, who are often sorely put to it for adjectives of general application, or by teachers who retreat into indefiniteness as a protective device, than the word Intelligence. The Anthropometric Committee of the British Association, in drawing up a list of mental characters for use in schools, definitely and purposely excluded it. Prof. Meumann (p. 522 *et seq.*) does something to clear up the connotation of the word. We have not yet estimated it in a quantitative way, he says, but that is not to be wondered at, for we have not yet decided what we mean by that higher development in children, apart from perceptual accuracy and manual dexterity, that we call by the name of intelligence.

Are the differences between the intelligent and unintelligent child differences in kind or in degree? Is intelligence, as Ebbinghaus says, the power to form new and original combinations? The author thinks the difference is a difference of degree only and that intelligence is by no means simply an excess of associative power. A witty man, he says, does not add to our knowledge, though he is facile in new combinations. And, in any case, only that man can be original who can cut himself loose from current associations. There are the critics and the systematisers, predominantly analytic and synthetic; but the highest grade of intelligence possesses great powers of both analysis and synthesis. One experimenter says children are predominantly associative. Prof. Meumann thinks, however, that his conclusions may depend on the nature of his tests. To all this I offer two considerations. Firstly, that the decision as to the nature of what is called intelligence in the child is to be sought for in the mental work of the child himself. Secondly, that the greatest factor involved in the general term intelligence is here omitted, namely, the apprehension of relevance. Intelligence is purposive; association and disassociation by themselves go for little; they must occur within the conative track. They can occur outside, but this is the play of fancy, and not a knowledge-making power.

An interesting appendix on physical measurements (p. 529) gives some valuable statistics of growth. Children of a higher social class are bigger than those of a lower one—this conclusion is true for England too, as was shown a year or two ago, I think, at Liverpool and Bradford, and in the last annual report of the London County Council's Medical Officer (Education). Whether this is due to an eugenic difference or an environmental one is not determined.

Many of the special problems of school method in different subjects are left to a second volume which I, for one, look forward to with pleasant anticipation.

W. H. Winch.

*Unsterblichkeit. Eine Kritik der Beziehungen zwischen Naturgeschehen und menschlicher Vorstellungswelt.* Von HERMANN GRAF KEYSERLING. München: J. F. Lehmann, 1907. Pp. 349.

COUNT KEYSERLING is already favourably known as the author of a work, *Das Gefüge der Welt*. Within a comparatively short period he has followed this up with the present treatise on Immortality. Plato's remark that there is much sceptism in things which concern the soul is still true, and any one who boldly tackles this subject is more sure of finding critics than followers. The present writer disagrees with a great deal in the book, but it is a work of distinct ability which may be read with profit. The author is exceedingly well informed and is full of ideas: he writes clearly and often eloquently, and he has the saving grace of nearly always being interesting.

Keyserling's method is good. He does not offer us a rigidly restricted discussion of one theme; he rather approaches the central point from different directions, and by evidence drawn from closely related fields of study strives to cast light on the main problem. A short introduction is followed by a chapter on "Belief in Immortality in General". He notes how widespread is the belief in the lower culture that the dead somehow continue to live. But he likewise points out how great differences of meaning and value are attached to the word 'Immortality' by various races and ages. In ancient Greece and Egypt, in India and among the early Christians we find a diverse significance given to the term. Yet behind the varieties of idea the writer sees the common tendency to believe that the life-principle is not exhausted by its temporal and spatial existence-form. Keyserling then goes on to discuss "Ideas of Death". In itself death is no transcendent problem, we are told; it is a physiological regulation. Life, here and now, has its form through limitations, and without these it could not exist as such. Death is the breaking down of these limitations, but it does not touch the essential principle of life. In his next chapter, "The Problem of Belief," the author begins to develop his own theory in a positive way. Premising that a criticism of the belief in immortality presupposes a criticism of belief in general, he proceeds to examine the nature of belief. Two misunderstandings must be avoided. Faith may be described as not-knowledge or knowledge-not-yet. In truth faith is the supreme and final presupposition of knowledge. In attributing to Kant, however, the view that faith is simply the negation of knowledge Keyserling does him injustice. The second misunderstanding is the confusion of faith with the idea or content of faith, a point on which much stress is laid. Hence faith in its essence is construed as a purely formal function. Still belief must refer to something—it is an act which affirms being—the existence of the presuppositions of life and knowledge which lie

behind all proof. This belief is an intuitive act; it is not a judgment but the basis of judgment. The being of the subject and faith in the object are correlates. "Faith is the unique function which stands in immediate relation to being, and we must believe in the self, because, as the presupposition of all psychical phenomena, it is more certain than anything capable of proof" (p. 120).

This theory of belief greatly influences the writer's conclusions, and yet it is very open to criticism. The postulates of knowledge are matters of faith, and it is true that faith as a psychological state always posits the reality of its object. But it is not true that psychological belief is a guarantee of epistemological validity. The postulates of knowledge are tested by the way in which they work as a support of knowledge and practice. Nor can I think that belief is prior to judgment and is its ground. All that we can say is prior is a mere awareness, the natural tendency of which is to pass into a judgment, and only when it does so is there belief. Ignoring this, Keyserling separates the form from the content of belief, and declares that the pure form or function gives immediate certainty of existence. So he is able to regard the psychologically motived judgments of faith as secondary products, and the ideas involved as of inferior value. This separation of form and content is inadmissible, and a faith which has only being for its object is valueless. Belief *that* God is, apart from a determination of *what* he is, is futile. Even the valid belief which the writer finds underlying the notion of immortality is something more than the mere assertion of existence.

As may be inferred, Keyserling does not hold that faith in its formal function can guarantee any of the ordinary ideas of immortality. He maintains, to our thinking wrongly, that we are *immediately* conscious of the *I* as function, power, and limitless activity. In this feeling of persisting power lies the germ of the instinct of immortality. But false accretions have gathered round the idea: these he boldly clears away in chapters on "Duration and Eternity" and "Consciousness," and some suggestive points are made. Briefly the result is this. Deeper than the empirical *I* and not identical with it is the fundamental *I* or Entelechy, man's true form. This transcends limits of space and time, and consequently transcends personality. Consciousness is secondary, a means, and not the essential in life. Not in this inconstant product but in the vast underlying activity resides the meaning of life. Keyserling assumes, and here we think he is wrong, that meaning and value do not necessarily imply a personal and conscious interest. In a chapter on "Man and Humanity" he develops the idea of a supra-personal unity—the system of connexions involved in the social order—which dominates and gives an end to the individual. And he tries to show that the higher and more efficient the system the more impersonal become the agents, the more is the person treated as a means. The one-sidedness of this is obvious. If personality is ultimate, he asks,

how explain the total sacrifice of the person for high ends? The answer would seem to be that, where such sacrifice has ethical value, it is always in the last resort directed to an increase in the personal values of life, not to subserve a supra-personal synthesis. The chapter on "The Individual and Life" is remarkable in showing the writer's familiarity with biology and his skill in using it to fortify his own position. He certainly makes clear how difficult, in the face of biological facts, is the standpoint of those who treat what is called individual as a self-centred and impervious entity. The main point, however, is the attempt to bind together the natural and spiritual realms, material and psychical unities, under the conception of nature or life. Keyserling boldly asserts, but signally fails to prove, that there is no essential difference between the teleology of nature and the teleology of the ethical will. The ethical, he says, only differs from the natural order in being a *conscious* endeavour to carry out the meaning of nature. Life is the ultimate principle, and it cannot be exhausted in forms of thought. Its movement is ever towards an order or synthesis which is impersonal. Man then is immortal; but it is the immortality of an essential life which is free of the trammels of personality and consciousness. *Sentimus experimurque nos eternos esse*, so said Spinoza: "No theory can refute this experience," adds Keyserling. The question remains whether the 'experience' embodies a value which can evoke either human interest or sympathy.

We had noted points for discussion in the last chapter on "The World of Ideas," but we cannot claim further space. Though we cannot endorse either the arguments or the conclusions of this book, it is none the less a very vigorous and interesting piece of work. The extent of the author's reading, both in science and philosophy, is noteworthy. Count Keyserling is quite a young man, and if he continues to devote himself to philosophical study a good deal may be expected of him.

George Galloway.

## VII.—NEW BOOKS.

*Apollonius of Tyana and other Essays.* By THOMAS WHITTAKER. London: Swan Sonnenschein, 1906. Pp. 211.

THIS is a collection of essays, six in number, by Mr. Whittaker, the historian of Neo-Platonism, dealing respectively with 'Apollonius of Tyana,' 'Celsus and Origen,' 'John Scotus Erigena,' 'Animism, Religion and Philosophy,' 'A Compendious Classification of the Sciences' and 'Teleology and the Individual'. All the essays, whether historical like the first three, or 'constructive' (to use Mr. Whittaker's own word) like the last three, are dominated by one thought, which finds perhaps its most striking expression in the opening sentence of the essay on Erigena. "Whenever the time shall arrive for a final estimate of the doctors of Latin scholasticism, the compassion expressed by Dante for the virtuous and philosophic heathens whom he saw in Limbo, will be transferred to them." The true 'times of ignorance' are for Mr. Whittaker those of the predominance of Christianity. In his view Christianity is one of the "most imposing and terrible manifestations" of the religion inspired by the Messianic ideal, the ideal, that is to say, of a priest-king exercising world-wide dominion, a religion which is by its nature the implacable foe of political and intellectual freedom. In the form of Orphism this type of religion had almost overwhelmed Greece "at the opening of its great period," but, fortunately for the future of civilisation, had failed to do so, and, by its failure, had permitted the establishment of those conceptions of the republican state and of liberty of philosophising, which, although latent throughout the period in which the Christian hierarchy was dominant, have retained their vitality and, reviving in modern times, have "gained a larger scope in the world of to-day".

Mr. Whittaker is prepared to deny, if we understand him, that Christianity has contributed anything to civilisation beside the preservation of certain elements of culture, in themselves alien to the religious system with which they came to be associated. The philosophical theology of an Athanasius or an Augustine is a 'pseudo-synthesis' 'entirely without human value' (p. 51). There are no doubt 'gleams of borrowed light in their Kingdom of Darkness,' but the view of Comte 'that the Catholic ideal, as one expression of the "human providence," must have been a progressive phase in the history of humanity,' is uncompromisingly rejected (p. 52). The best that can be claimed for it is that it has served as an 'obstacle posited by the world-soul in order to rise more explicitly to the idea of spiritual freedom'. The period of its ascendency was but a night or winter of the spirit. Yet it is admitted that Christianity had the merit of preserving in its sacred Scriptures 'elements of ethical culture which, when cleared of their dogmatic superstructure, could be seen' by thinkers like Spinoza 'to contain something emotionally unique'. 'In the Hebrew prophets there is a more ardent, though not a purer and certainly not a nobler, morality

than that of classical antiquity even in its final stage; and the teaching of the Gospel has become, when dissociated from a creed which was always extraneous to it, the inspiration of a more impassioned, though not of a wider, philanthropy.' This teaching, 'distorted beyond recognition in its association with the ecclesiastical system,' may be described as 'the teaching of Jesus,' though Jesus is for Mr. Whittaker a purely legendary personage (p. 53).

It must not be supposed that I regard Mr. Whittaker's position as unassailable, because I do not attempt within the limits of a short notice to estimate the true debt of humanity and civilisation to the Christian religion, theology and Church. Christian apologists have sometimes seemed to attribute to Christianity by itself apart from other spiritual forces much that has been due to it only when combined with these; it would be no less a mistake to attribute to them apart from Christianity what they have only produced in combination with it. The determination of the share in the complex result either of the original Gospel of Jesus or of the Messianic religion which was so early, if not at the very first, associated with it, would need a very careful inquiry; and it is always to be remembered that into the constitution of Christianity, in the sense of the religion of Christendom, had entered many other elements—Greek philosophy among the most important—which while other than either of the two above mentioned are not therefore alien to the historical Christianity which results from their interaction with those two. But I may venture to suggest that Mr. Whittaker's account of Christianity as a religious system is one which a 'practising Christian' (to use a Gallicism) will refuse to recognise as just, not merely because it is unfamiliar and hostile, but because it is onesided and external. I do not know how far one would be right in suspecting a certain connexion between Mr. Whittaker's deficient knowledge of the Christian religion from within and his scepticism as to the actual existence of its reputed founder.

Mr. Whittaker, however uncompromising in his condemnation of historical Christianity, always writes with dignity; and his high seriousness keeps his criticism, severe as it is, free from anything which should cause offence to any reasonable man, no matter how deeply attached to the system which Mr. Whittaker rates so low. His fair-mindedness is conspicuously shown in his very true remark (on p. 203) that Berkeley's 'theological purpose never caused any deviation in the logic of his thinking'. Berkeley has not always obtained so much justice at the hands of critics far less unsympathetic with his theological position. Mr. Whittaker, when speaking of Berkeley, makes an interesting suggestion as to a possible Leibnitzian development of his idealism which should render it less incongruous with our belief in continuity in nature. I doubt however whether the real edge of the difficulty involved in the doctrine that the *esse* of external things is *percipi* can be turned by the supposition that a percipient 'spirit' (in Berkeley's sense) is connected with many things which Berkeley did not hold to be animated by any such. This doubt might be raised and discussed sufficiently in reference to human bodies without proceeding further. The *esse* of a human body does not less consist for Berkeley in its being perceived because of its close association with a human spirit.

Mr. Whittaker's last essay on 'Teleology and the Individual' exhibits him as taking a view which has much in common with Dr. McTaggart's; and we may suspect that the 'pluralism' (so to call it for the moment) in the systems of both thinkers is connected with an agreement between them in finding no need for *worship* in religion. Dr. McTaggart expressly holds worship not to be a fundamental need of the spirit;

while yet it would be quite incorrect to deny to his ultimate synthesis a religious character. Those who think otherwise of worship will not be able to accept the philosophy of religion offered either by Dr. McTaggart or by Mr. Whittaker.

C. C. J. WEBB.

*Pioneers in Education.* I. Rousseau. II. Spencer. III. Pestalozzi. IV. Herbart. By GABRIEL COMPAYRÉ. London: George G. Harrap & Co. Pp. 120-140. Price 2s. 6d. each vol.

Each of these monographs is by the well-known historian of Education, M. Gabriel Compayré, and forms a neat little volume of 120 or 140 pages. The translation has been well done by R. P. Iago and Miss M. E. Findlay. On page 12 of the Spencer it is stated that he published *Social Statistics* in 1850. Probably '*Statistics*' may be an overlooked printer's error for 'Statics'.

The aim of the series is to represent each of the great pioneers of educational progress as he lived and worked; second, to give his historic setting and show him moving among the tendencies of his epoch and the educational conditions of his age; third, to bring old ideas face to face with modern needs and opinions. These volumes admirably fulfil their purpose. They enable the reader in each case to see the man in relation to the movement, and to appreciate the immediate and the permanent value of his work. M. Compayré is eminently fair in his criticisms, and may be trusted as a guide through the conflicting theories and systems. A student who reads these books as part of his study of Spencer or Herbart, will not be carried off his feet by either of them, but will have a clearer and worthier estimate of the value of each master's teaching.

Rousseau opens this gallery of portraits, and rightly so. He was "the originator of the modern movement," the 'leader and inspirer of most of the educators who came after him'. Reformers in education, as in other matters, succeed in so far as they are able to give effective vitality to the new spirit which is brooding over the face of the intellectual and social waters, and secure for it suitable embodiment in a book, a code or a system. Rousseau is the voice of democracy demanding freedom and naturalness in a world of conventionality. At the same time he is to some extent the substance of his book. "What Rousseau would fain have been and was not, Émile is to be." M. Compayré brings out clearly the great debt that modern education owes to Rousseau; at the same time he has a keen eye for the faults and weaknesses of Émile's training. Like Plato and Aristotle, Rousseau tended to lose sight of the true unity of the human being. He broke up growing life into sections, and forgot that Education must take account of the simultaneous evolution of bodily and mental powers. On the other hand, unlike Plato and Aristotle, he tried to get the perfect *individual* man without realising the absolute necessity of a social training.

In Spencer we have "a full and clear exposition and enlargement, an orchestral setting of themes borrowed from Émile". The inspiration of Rousseau is evident, though unacknowledged, throughout the whole of the famous Essay on Education. The main difference is that now for the first time the idea of evolution affects the statement of the aim and the method. The great credit of Spencer is that more definitely than any of his predecessors he insisted that Education should be scientific. Here we do not mean his apotheosis of the sciences as necessary subjects of study, but his implicit and explicit demand that scientific knowledge of body and mind must be called in to guide the educational process. In

criticising Spencer's views about the prime importance of the sciences as subjects of study, M. Compayré, among other acute remarks, makes it clear that Spencer, when he sneers at "the fanaticism of instruction," contradicts his own main position, and by denying that knowledge has any beneficial effect on conduct, implicitly asserts the inefficacy of science as an instrument of moral education.

Every system of education implies a philosophy. Pestalozzi, with all his enthusiasm and saintly zeal for primary education, failed to reach a system because he had not grasp of mind enough to formulate for himself a philosophy. Yet his failures were fruitful successes. His continual insistence on "intuition" as the absolute principle of knowledge has made the elementary stages of instruction in all civilised countries much more efficient. He is the apostle of the perceptual stage of intellectual education. "How many processes, now familiar in the schools, were initiated by Pestalozzi!" Even modern geography owes much to the simple-minded enthusiast. "Pestalozzi," said Carl Ritter, "did not know as much geography as a child in our primary schools; it was, however, whilst talking to him that I felt the impulse toward natural methods awaken in me."

The close relation between a system of education and a philosophy is nowhere better seen than in the case of Herbart. One outcome of his philosophy is that the understanding is held to be the principle of the will, and that actions therefore conform to ideas. There is thus no real separation between intellectual and moral education. According to Locke and Spencer instruction counts for little in the making of character, but according to Herbart instruction is of fundamental importance. On modern lines Herbart reasserts the ancient doctrine "Virtue is knowledge," and stands for the principle of education through instruction.

The summary of Herbart's psychology and philosophy is clear, and the criticisms are pointed and just. Yet in spite of the weakness of his psychology and ethics, Herbart is given a well-deserved place in the first rank of educators. He exalted the function of the teacher, and looked upon education as a sacred mission. "His work stands as one of the most powerful efforts ever put forth to introduce into the art of education the spirit of philosophy and of science."

JOHN EDGAR.

*Psychology*. General Introduction. By C. H. JUDD. New York: Scribner's Sons, 1907. Pp. xii, 389.

This is 'Volume one of a series of text-books designed to introduce the student to the methods and principles of scientific psychology'. It aims at the development of a functional view of mental life, adopting the genetic method of treatment and giving 'to the physiological conditions of mental life a more conspicuous place than has been given by recent writers of general text-books on psychology'. The author also endeavours 'to make as clear as possible the significance of ideation as a unique and final stage of evolution'. The first 130 pages are indeed well suited to this purpose. Here the student will find a simple introduction, two clear and useful chapters on the nervous system and excellent chapters on the sensations, with good illustrations. There are, according to Judd, five kinds of mental processes: sensation factors, relations between sensations, attitudes feeling, interest, attention), memory contributions to experience and ideational relations. The latter half of the book is, for the most part, devoted 'to the exposition of the

general theory of the author, that all the unity of experience in general and of the various sensory, affective and volitional complexes, in detail, is dependent upon the unity of motor processes, not as such, nor as represented by the peripheral sensations aroused by them, but purely as central connexes, binding sensory or rather afferent processes together and leading them over to efferent processes. The unity is not on the afferent side, as has been thought usually, but has, according to Judd, to be placed a little further over the nervous arc, nearer the efferent side. Physiology has, of course, been throwing important light upon the function of the 'final common path' of late years, and Judd seems to see in this new point of view a welcome refuge from the difficulties of the old theories of the elaboration of sensations into complex experience. Hence the prominence of physiological speculation in this introduction to psychology, "Language is so important a form of activity that human consciousness may be said to be determined in general character and especially in its types of organisation, more by the ability to respond to impressions by movements of the vocal chords than by any other motor ability whatsoever" (p. 193). Even feeling is based on the unity of motor processes. "The feeling is not a content factor, as are the noise and the printed words; it is rather the experience of a restless wavering between contents. It is 'the characteristic consciousness of inability to settle down to one kind of attention'; it is an attitude of effort to secure an adjustment which seems to be just beyond reach" (p. 197). "The physiological conditions of both the organisation of experience and its feeling-tone are the same" (p. 204). "There can be no question that the ability to produce vocal harmonies through muscular activity often stands in the closest relation to the ability to appreciate sound harmonies" (p. 211). "Indeed the suggestion made by these two writers [James and Lange] is so productive that the present difficulty in describing the conditions of feelings is of an entirely different kind from that which existed at first. We have been led to recognise that not only feelings, but a great many other phases of experience, are related to bodily activity and are explicable in terms of activity rather than of sensation. The difficulty now is, not in believing that feeling is directly related to activity, but in finding out what particular characteristics of motor organisations will explain the special characteristics of the different phases of consciousness which are related to activity" (p. 196). Doubtless that is the difficulty, and one can only sympathise with the author in it. When we come to ideation, the problem seems to become still more complex. "The value of words lies in the fact that they carry experience forward, furnishing only so much content as is necessary to support thought without overloading experience with all the detail. . . . If we use such a word as 'savage,' we are likely to take an attitude of superiority somewhat analogous to that taken towards the animals, but flavoured more than the former idea with a concession of equality. Again, if we speak of higher things, such as angels, we assume an entirely different attitude, without necessarily giving ourselves the trouble to fill in any definite content." "General ideas are in essence nothing but dispositions toward activity" (p. 268), with "something of development toward direct motor habits" thrown in.

It is unnecessary to assail this theory actively in its details. It is another of those theories which attempt to stitch mental experience together out of a vast number of sensation-patches. The variant on the old way is here, that the patches are not sewn together at the edges and do not ruffle one another up into proper position, but that they somehow get hitched to the ends of single motor strings or sets of these. When the right string is pulled, up comes the right experience, which is all that

it is, only because it is in the way of coming up in one piece. But the days of such theories are well nigh counted. Let an 'attitude' suffice for the reader. Judd's theory can only be regarded as a piece of special pleading, totally unsuited for the use of students in a general introduction to psychology. They will not understand it, because they cannot see it in its proper perspective. They could only use it as accepted creed, as they probably would. An introduction should surely contain some record of the facts upon which induction is based in such fields as memory, ideation and language, and some account of other theories than only the author's.

H. J. W.

*Plato or Protagoras: being a Critical Examination of the Protagoras Speech in the 'Theætetus' with some Remarks upon Error.* By F. C. S. Schiller, M.A., D.Sc. Oxford: Blackwell, 1908.

Mr. Schiller's main thesis is, briefly, that the Βοήθεια which Plato puts into the mouth of Socrates in the *Theætetus* 166 *a*-168 *c* is, in substance at least, the genuine λόγος of Protagoras. This he infers mainly from the fact that Plato never refutes it in the subsequent course of the dialogue. This seems to show that he did not fully understand it. Now Mr. Schiller is clearly right in maintaining that the position taken up in the speech is never refuted, and it was well worth while to call attention to the fact; but his inferences from it appear to rest on certain historical assumptions which are untenable. In the first place, there is no reason for holding that Plato was bound to "refute" it. Mr. Schiller's view of the purpose of the dialogue is that Plato has made Protagoras "into a stalking horse in his campaign against his own professional rivals, the Sophists". Who were these? The only man that can be called a professional rival of Plato in any sense is Isocrates, and in his circle the term "Sophists" was applied to Plato himself and his friends. Mr. Schiller himself condemns "the invention of imaginary Protagoreans" as a desperate expedient, and I have no doubt he is right. We have to do here with an illusion which is the direct result of Plato's consummate dramatic art. We keep forgetting that in these dialogues Plato is dealing with the past. There may be nearly three generations between the date of the Ἀλήθεια and that of the *Theætetus*.[1] In the second place, Mr. Schiller has to assume that the work of Protagoras no longer existed at the time the *Theætetus* was written, and that Plato is reproducing his argument from memory. This is connected with the anecdote of the condemnation of Protagoras and the public burning of his book which is narrated by "Diogenes Laertius" ix. 52. Mr. Schiller becomes pathetic over this instance of successful persecution, but the story is in a high degree doubtful. At least, I do not see how it is to be reconciled with what Socrates tells Anytus in the *Meno* 91 *c*. According to that, Protagoras was nearly seventy when he died, and had been a professional teacher for forty years, and yet no one ever discovered that he corrupted his pupils. On the contrary, during all that time and down to that very day, his reputation was unimpaired (εὐδοκιμῶν οὐδέν πέπαυται). But, even supposing that a few copies of the

[1] Mr. Schiller's statement that Protagoras's book was published in 411 (or 412) B.C. is based on a combination which no one now accepts. Protagoras was old enough to be Socrates's father, and his book must have been well known for at least a generation in 412 B.C. On the other hand, the *Theætetus* is probably not much earlier than 360 B.C.

Ἀλήθεια were burned to please the people, that would have no serious effect. At the very worst, fresh ones could be got from Thurii or Abdera. The discourse of Anaxagoras, which was *bien autrement suspect*, could be picked up at Athens for a drachma at the outside long after his banishment (*Apol.* 26 *d*), and Plato assumes all through that the work of Protagoras was accessible to every one. The young Theætetus has read it "often" (152 *a*), and it is spoken of as a defenceless orphan which Protagoras had left behind to be insulted, because its natural guardians were unable or unwilling to protect it. As a matter of fact, Porphyry read it centuries afterwards, and quoted it verbally, though Eusebius, to whom we owe the information (*P.E.*, x. 3, 25), unluckily omitted to transcribe the quotations.

It is impossible, then, that the βοήθεια can be the argument of Protagoras himself, and Mr. Schiller's thesis falls to the ground. If we ask why Plato should have written the passage at all, the answer is probably that he thought Protagoras really meant something of the kind. On the face of it, he had merely intended to attack the mathematical and astronomical science of his day. In particular, the doctrine of incommensurables which arose from the difficulties of Pythagoreanism, and was treated empirically by Theodorus of Cyrene, must have seemed a futile thing from a "humanist" point of view. As it was just Theætetus himself who first gave a complete theory of the matter, I would suggest that the introductory part of the dialogue gives us the clue to the sense in which Protagoras originally used the words ἄνθρωπος μέτρον. The familiarity of the phrase is apt to blind us to the fact that it is not an immediately obvious way of stating the humanist position. Why "measure"? In the same way, the science of Southern Italy maintained that the earth was a sphere, but from a humanist point of view it was flat, "like a disc or a tambourine," as the atomists at Abdera continued to teach.[1] Plato, I fancy, was willing to believe that there was something more in the position of Protagoras than a mere revolt against science, and he has indicated in the βοήθεια what he conceived that something to be. And, if we ask why he does not refute it, the answer to that may be that Plato himself was more of a "humanist" than Mr. Schiller seems to suppose.

JOHN BURNET.

*Thought and Things: A Study of the Development and Meaning of Thought or Genetic Logic.* Vol. ii. *Experimental Logic, or Genetic Theory of Thought.* By J. M. BALDWIN. London: Swan Sonnenschein, 1908. Pp. xv, 436.

For reasons sufficiently indicated in the review of Prof. Baldwin's first volume (N.S., No. 66) it would be premature, and hardly profitable to attempt an estimate of the value of this work until it has reached completion. And as we learn from the Preface of the present instalment that "the third volume is writing but not written," it may be presumed that time and the volume will automatically bring about this consummation. Meanwhile it is instructive to see how Prof. Baldwin meets the critics who grappled with his first volume. This is his reply to those who desiderated more historical orientation: "There is nowadays, especially in English books, so much straining to justify one's views by recondite citations from Aristotle, Kant, Mill, and the prophets generally, so much disputation over what these worthies really meant, so much

[1] Λεύκιππος τυμπανοειδῆ (τὴν γῆν). Δημόκριτος δισκοειδῆ μὲν τῷ πλάτει, κοίλην δὲ τῷ μέσῳ.

of what seems to be not a hiding of one's candle in a bushel, indeed, but a losing of it in the searchlights of earlier time– that it may be a relief to readers to find a book in which conclusions and their reasons are simply stated for what they may be worth". Of course it may, though it may equally be that the reader will cavil no less at this claim than at the motto inscribed over the whole, and doubt whether he would have discovered either the 'simplicity' or the beauty in Prof. Baldwin's work, if he had not himself called attention to it. Certainly Prof. Baldwin's terminology, whatever its merits, does not obviously make for simplicity, except in the enamoured eyes of its author. He is indeed very proud and quite defiant about it. "As to the use of new terms—on that point, I simply take up any glove the critic may see fit to throw down" (p. 421), and he expresses his conviction that "if any of the views expressed in my work survive, the terms will 'win out' too; if the views do not survive, the terms may perish with them" (p. xi). One cannot but think that in this dismal prognostication Prof. Baldwin may be mistaken; it is to be hoped that for the views which he shares with other thinkers and for which better terms are already in existence—and their number is not inconsiderable—the best terms will survive, and that if at present there are no good ones, better ones will be devised. For, frankly, Prof. Baldwin's coinages are rarely happy: they oscillate between cumbrous Greek and unattractive journalese. But even this would not be fatal, if he would only stay to define them clearly and to motive their introduction adequately. As it is, they are too often sprung upon the reader without warning from sheer delight in technicality, and they seem needless, because their use is not made clear. Of course the matter is ultimately one between the writer and his reader, and the latter can always protect himself by declining to proceed with the former. But Prof. Baldwin runs serious risks of burying whatever is good in his ideas by the defects of his exposition, and he would in any case be well advised to add a final glossary to his third volume.

F. C. S. SCHILLER.

*No Struggle for Existence, No Natural Selection: A Critical Examination of the Fundamental Principles of the Darwinian Theory.* By GEORGE PAULIN. Edinburgh: T. & T. Clark, 1908. Pp. xx, 260. 5s.

The author of this book possesses a literary style much above the common, and addresses his task with very manifest piety and sincerity. Starting with doubts as to the validity of Darwin's exposition of evolution by means of Natural Selection, he comes at length, though a lifelong evolutionist, to "reconsider his views in regard to the doctrine of a material evolution from lower to higher forms of life". But he does not seem to be quite aware of how much the one contention is graver than the other, nor to realise that in denying the adequacy of the hypothesis of Natural Selection he has many biologists on his side, while in renouncing the theory of Evolution he parts company with the thinkers of his time. As Malthusian doctrines of population and subsistence led Darwin towards his theory of a struggle for existence among all creatures, so our author, retracing his steps, reverts from a criticism of Natural Selection to a discussion of the Law of Population. In this part of the work he adduces many interesting facts and statistics which we commend to the student, but we fail to follow the writer's argument or to be satisfied with the result at which he arrives. He attaches great importance to the law "That a man does not marry until he sees himself in possession of means that will enable him in his degree to marry"; and

he finds that, in the main through the operation of this law, "population does not tend and cannot possibly tend to increase faster than the means of subsistence". In short, in this best of all possible worlds, there is no over-population and no lack of subsistence, and (what is perhaps less open to dispute) there is always work for the competent.

The critic is not surprised to find running through the optimistic argument of this book a tendency to advocate protection and to deprecate free trade; but he is grateful to learn that protection, by increasing wealth and enlarging the demand for alien luxuries, tends not to isolation but to cosmopolitanism, and brings us the nearer to the federation of the world.

D. W. T.

*Spirit, Matter and Morals.* By R. Dimsdale Stocker. London: A. Owen & Co. Pp. 97.

This little book, in which Mr. Stocker dismisses the claims of Spiritualism, Materialism and "Rationalism" to furnish a satisfactory basis for human conduct, is not badly written. His own solution is "Rational Ethicism," which, while appealing to the imagination and the heart, identifies morality with the rational nature. The newest, and least desirable, thing about this appears to be the name.

D. M.

*Einleitung in die akademische Pädagogik.* Von Dr. Hans Schmidkunz. Halle a. Saale, 1907. Pp. 206. Price M.3.

There are not wanting signs in this country as well as in Germany that interest is awakening in the problem of extending pedagogical principles to the highest grades of teaching. In England and Scotland during the last ten years there have been many criticisms of the old lecture system in the Universities and in professional and technical Colleges. In the study of the sciences the laboratory has been counting for more, the lecture room for less. Demonstrations and lectures have become supplementary to practical work, instead of taking its place. Even in the study of languages and the various branches of philosophy old methods are being discarded or modified, and methods which demand mental activity rather than mere receptivity are being adopted. In teaching Classics, research is encouraged as well as in teaching Chemistry. In teaching philosophy it is now recognised that to hear lectures about a system of philosophy is not to become master of that system, still less is it to become a philosophic thinker.

The pedagogic task in elementary and secondary schools has for a considerable time been undergoing a process of methodical organisation, and is gradually being firmly established on a basis of scientific knowledge. We still need a higher practical and theoretical pedagogy, a theory and practice of University and Technical Education.

In this volume an attempt is made to lay down the main outlines of such a system. The author holds that pedagogy like every science is a criticism holding a place mid-way between the dogmatism which lays down hard and fast rules, and recognises no limits to its knowledge, and the scepticism which cannot believe that scientific knowledge has any guidance to give in the practical work of Education. The dogmatism was illustrated by some of the old-fashioned training colleges, the scepticism is seen in the recent confession of a well-known headmaster, "that like other secondary schoolmasters he is very sceptical of the value of psychology"

Academic pedagogy—or the pedagogy which seeks to find the true principles and the best methods of University and Technical Education—the pedagogy of Arts and Sciences—is not something different from or unconnected with General Pedagogy. As our author says, much may be learned from pre-academic and post-academic methods. Pedagogy is one—but it has its constants and its variables. It recognises stages of mental growth. It varies its practical methods not merely to suit the perceptual or the ideational stage, but to suit different types of individuals and all grades of intellectual advancement.

An analysis is made of the chief characteristics of Academic Pedagogy. Among these are "freedom of teaching and learning," "personal bias, and specialisation," "the traditions of research and production," "special study".

The chief 'forms' of the highest teaching are classified for full consideration. They are found to be: (1 Tutorial advice and supervision. (2) Lectures. 3) Practical work in the laboratory, or the literary or philosophic task taken up for study and investigation by the student. (4) Private study.

The author provides an excellent example of pedagogical criticism when he considers how far the well-known didactic maxims can be applied to the most advanced stages of teaching.

"From the easy to the more difficult," "from the simple to the complex," "from the objective to the subjective," "associate teaching with present knowledge and interest"—these and other maxims are carefully examined, and it is shown that—unless the terms are carefully defined—their converse would often be a more correct statement of true working principles.

The volume is enriched with an appendix containing many valuable notes and references, and the bibliography at the end shows that in Germany the subject has been steadily growing in interest.

It is worth reading by all who are interested in the question of securing the utmost efficiency in our highest educational institutions.

JOHN EDGAR.

*Zur Religionsphilosophie. Drei Betrachtungen.* Von HERMAN SIEBECK. Tübingen: J. C. B. Mohr, 1907. Pp. iv, 79.

In this brochure Prof. Siebeck has brought together three papers, entitled "The Progress of Humanity," "The Development of Religion," and "The Power of Nature and the Human Will". The first was originally delivered as a *Rektoratsrede*; the second appeared in the *Zeitschrift für Philosophie*, but has been revised and added to. Perhaps the most suggestive and valuable of the articles is the first. It was noticed at some length in MIND on its first publication (N.S., No. 6, p. 256), and it may suffice to indicate the main ideas. The meaning of history is not to be found merely in the process itself. The time movement has for background the eternal, and historical values point to transcendant values. Progress is always in terms of persons, and represents a vocation not an immanent and necessary law. The second paper opens with an appreciative sketch of Eucken's *Philosophy of Religion*, the main positions of which are sympathetically endorsed. Again Siebeck contends for the place of freedom in spiritual development. *Suum esse conservare* becomes here a conscious task which implies freedom. With the latter is given the possibility of sin, while natural evil is a presupposition of life. Whether the world is good or evil depends on our personal attitude to the world. In the last article Siebeck raises the

question of the relation of the intractability of nature to human life and endeavour. He finds it is involved in nature's uniformity, and therefore in the end a condition of human culture. The resistance nature offers is a stimulus to development, and its uniformity makes possible the realisation of values. Physical development has its worth in subserving spiritual and personal values, and these in turn have their ground and goal in a supramundane Good.

This is an excellent little work, thoughtful as well as spiritual in tone; and it may be commended without reserve to the attention of those interested in religious philosophy.

G. G.

*Das Ohrlabyrinth, als Organ der mathematischen Sinne für Raum und Zeit.* Von E. von Cyon. Berlin: Julius Springer, 1908. Pp. xx, 432. M.14.

This monograph of 425 pages is an exhaustive exposition of the physiology and psychology of the sense of space or of orientation. The study of the semicircular canals as the peripheral organs of this sense has been von Cyon's lifework, his thesis "Sur les fonctions des canaux semicirculaires et sur leur rôle dans la formation de la notion de l'Espace," having been published thirty years ago.

The results of the work of contemporaries is, however, everywhere acknowledged, the contributions of Mach, the metaphysician; Crum Brown, the chemist; Breuer, the practitioner; and Ewald, the physiologist, being all duly noticed, whilst the historical development of our knowledge as to the functions of the ear-labyrinth is fully but succinctly treated.

Chapter i. gives an account of the facts experimentally ascertained; chapter ii. describes the effects of rotations round various axes; chapter iii. deals with the development of our notions of space as dependent on sensory factors; chapter iv. is concerned with results of mutilations of the canals, and in particular with the behaviour of the Japanese "dancing mice"; chapter v. describes the illusions related to the stimulation of the canals; chapter vi. is entitled 'the physiological principles of the Geometry of Euclid,' while chapter vii. analyses our "sense" of time and our consciousness of quantities.

There are forty-five figures in the text, five plates, an index, and an excellent photogravure of the author.

A work like this illustrates very strikingly what modern specialisation in physiological psychology means.

D. F. H.

*Die Wiedergeburt der Philosophie.* Rede zum Antritte des Rektorates der kg. Un. Berlin, 1907. Carl Stumpf. Leipzig, Barth, 1908. Pp. 38.

Stumpf's inaugural address is a profession of faith in the philosophical Renascence of the last quarter of the nineteenth century. Starting from the acknowledgment, which place and date made natural, of the ethical inspiration of Fichte's century-old *Reden* to the German people, he asks why, when the moral fervour of the prophet Fichte still pulses in the life of his compatriots, his intellectual construction leaves them cold and unillumined. It is not a question of age, for Leibniz, older and no less artificial in his system, is in touch at many points—in some more so than even Kant—with living movements. It is that German idealism forgot that philosophy must be metaphysical in the literal sense, an aftermath

of science. In an age of scientific advance the system-makers swing to the other pole of speculation, mysticism. With Lotze and Fechner, each grounded in his scientific study, begins a new stadium of development. The education of a philosopher must, so Stumpf holds with Aristotle, include one science, and he can hardly concede that the historical sciences really satisfy the requirement, given the problems of the present. So, with well-chosen phrases and sound appreciations of some at least of the forces at work around him, Stumpf declares where it is that he stands.

H. W. B.

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Fr. Hermann, *Gehirn und Schädel, Eine topographisch-anatomische Studie in photographischer Darstellung*, Mit 69 zum Teil mehrfarbigen Lichtdrucktafeln, Jena, Gustav Fischer, 1908, pp. 12 + 69.

John M. O'Sullivan, *Vergleich der Methoden Kants und Hegels auf Grund ihrer Behandlung der Kategorie der Quantität*, ("Kantstudien": Ergänzungsheft), Berlin, Reuther & Reichard, 1908, pp. 129.

Giordano Bruno, Opere Italiane ii. *Dialoghi Morali con Note di Giovanni Gentile*, Bari, Laterza and Figli, 1908, pp. xix, 512.

Giovanni Cesca, *Religiosità e Pedagogia Moderna*, Messina, Vincenzo Muglia, 1907, pp. 185.

## VIII.—PHILOSOPHICAL PERIODICALS.

Philosophical Review. Vol. xvi., No. 6. **J. A. Leighton.** 'The Objects of Knowledge.' [The object of knowledge, as meaning any terminus of judgment, implies the distinction of idea of object and object that warrants idea. Since knowledge or truth is neither idea nor object, taken alone, it must be a consciousness of the relation between judging mind and terminus of judgment. Hence truth, while actual or real, does not exist as particular things exist. Reality has a dual character. We may classify cognitive objects as over-individual existents, individual existents, and over-individual principles of validity. The first two classes involve the third. "All types of cognition presuppose the absolute validity of an ideal systematic or self-coherent whole of experience conscious of itself."] **A. O. Lovejoy.** 'Kant's Classification of the Forms of Judgment.' [It has been supposed that Kant took his classification from the Wolffian logic. Hauck has disproved this view, but deference to Kant has blunted his criticism. (1) In dealing with quantity, Kant has slipped from logic into mathematics, has nevertheless arbitrarily adhered to a triple division, and has been led into this error by his preconception of a triad of mathematical categories. (2) Under quality, Kant has confused the basis of division to be used for distinguishing species with that by which genera are distinguished. (3) Under relation, Kant is not confused, but his classification is intrinsically poor. (4) By modality, Kant means three different and incompatible things.] **E. H. Hollands.** 'Possibility and Reality.' [Spinoza's doctrine, that the real includes the possible, is based not only upon his abstract conceptualism in epistemology and his substantialistic pantheism in metaphysics, but also upon the assumption that there is a principle of order in the universe. Leibniz' doctrine, that the possible includes the real, is both a postulate of his ethico-religious views, and also a result of logical theory. It is, however, full of logical difficulties, chief among which is that arising from the separation of essence from existence. These difficulties are not overcome by Moore and Russell in their recasting of the Leibnizian view.] Discussion. **G. W. Cunningham.** 'Dr. Ewer on the Freedom of the Will.' [Critique of Ewer's paper in xvi., 298 ff. The writer attempts to prove the inadequacy of the existential standpoint, and to state briefly the claims of the concrete teleological point of view.] Reviews of Books. Notices of New Books. Summaries of Articles. Notes. Vol. xvii., No. 1. **W. James.** 'The Pragmatic Account of Truth and its Misunderstanders.' [Seeks to clear up certain misapprehensions regarding pragmatism: that it is only a re-editing of positivism, that it is primarily an appeal to action, that it explains not what truth is but only how it is arrived at, that it ignores the theoretical interest, that it is shut up to solipsism, that pragmatists cut themselves off from the right to believe in ejective realities, that no pragmatist can be a realist in his epistemology, and that what pragmatists say is inconsistent with their saying so.] **H. A. Overstreet.** 'The Ground of the Time-

Illusion. [The typical error of imperfect, human consciousness is the perspective quality, of which we have illustration in space, in time, in attention, and in the illusion of egoism. On the subjective side, this error lies in the fact that every perspective consciousness involves different degrees of interest. In the special case of time, its source is to be found in the durational character of our experience: for experience of duration necessarily implies experience of at least two durations of different rates, and difference of experienced rate depends upon difference in intensity of interest. Now varying intensity of interest means a divided self: hence if, in my attempt to judge values, I give always to my judgment the whole power of my person, I become perfect and my experience becomes timeless. Timelessness is thus the expression of perfection of spiritual nature, of interest in every respect entire; the time-illusion is to be escaped by inner growth into wholeness of life, by the inward path of a perfect love.] **C. F. Keary**. 'Matter in Ancient and Modern Philosophy.' [To understand Plato and Aristotle when they deal with 'matter' and 'form,' we must cast off the primal disability which springs from our confusion (due to 'cause and effect' and the idea of evolution) between the logical and the temporal 'first'. With the Greeks, physical science was in embryo, with us it is full-grown; while art, to us a sort of *hors d'œuvre* in life, with them was the essential of life. We must bring ourselves to realise that the substance of knowledge is the thing we know; that there is no substance so substantial as the thing itself, the gift of our senses joined to imagination or artistic faculty. Then we shall see that the statue is logically anterior to the bronze in the statue; that the tree as we know it is the 'substance' of the tree, and not the materials into which we may subsequently analyse it; that 'form' in general is being or substance.] **W. Urban**. 'What is the Function of a General Theory of Value?' [Practically, we are passing from accumulation of knowledge to its evaluation; theoretically, we are becoming aware of a new side of reality, a world of values. Since the most significant questions of philosophy appear first in the special sciences, it is in economics, ethics and æsthetics—especially in economics—that the theory of value is being developed. The problem is twofold, descriptive or psychological, and normative or axiological. Psychologically, the discovery of new facts has led to a reformation of our conception of the nature and conditions of the worth-judgment, and so of the laws of valuation; it has thus been possible to co-ordinate the different types of worth-attitude and of objects of value, as required by a general theory of value, and to explain by empirical laws spheres of valuation into which such explanation had not yet penetrated. Axiologically, the distinction between subjective and objective (normative) has been worked out; normative objectivity has been classified as instrumental and intrinsic; and the normative laws are being brought into harmony with the fundamental capacities of feeling and will.] Discussions. **B. C. Ewer**. 'Determinism and Indeterminism in Motives: a Reply.' **G. W. Cunningham**. 'Determinism and Indeterminism in Motives: a Rejoinder.' Reviews of Books. Notices of New Books. Summaries of Articles. Notes.

Psychological Review. Vol. xiv., No. 5. **W. M. Urban**. 'The Nature of Feeling and Will and Their Relations.' [Two views have been put forward with clear consciousness of the problem involved in the relation of the appreciative to the scientific description of the psychical, the one dualistic (Meinong) and the other monistic (Wundt). Critical consideration leads to the acceptance of the identity theory: the difference between feeling and will can be described only in conceptual, logical,

retrospective terms ; feeling and desire are differences of genetic mode, relative differences of functional meaning, not of content. This result justifies, as it also follows from, the writer's view that the worth of an object is its affective-volitional meaning, given in feeling-attitudes in which there is always reference to conation.] **R. W. Sellars.** 'A Fourth Progression in the Relation of Mind and Body.' [Beyond Baldwin's projective, subjective and ejective progressions is a progression of duplication, which takes us from the psychological to the psychic. Each individual now has a unique psychic life ; but the body, since the terms are on the same level, also becomes unique and passes out of experience. Reality is thus wider than experience ; but things-in-themselves are known in the sense that electricity is known—we can handle and manipulate them. The individual must be naturalistically conceived, with conscious experience as a functional part and expression of it in its relations to other individuals ; and the problem of two minds knowing the same thing must be attacked functionally : like organisations in like relations have like experiences, and gradually come to recognise this likeness.] **H. T. Woolley.** 'Sensory Affection and Emotion.' [The writer expounds and accepts Stumpf's view of the sense-character of the elementary affective processes, but extends this view, against Stumpf, to the emotions as well : there are all stages between an affectively-toned sensation and an emotion. She suggests further a distinction between affective and algedonic tone, the latter depending on the intensity of the algedonic sensations, the former upon the total organic reaction of organism to stimulus. She concludes with a restatement of this position in functional terms.] Discussion. **M. Meyer.** 'An Experimental Course in Æsthetics.' [Outline of a course in experimental æsthetics, largely based upon Hildebrand's *Problem der Form in der bildenden Kunst.*] Vol. xiv., No. 6. **H. Carr.** 'Apparent Control of the Position of the Visual Field.' [The writer reports a case of translocation of the visual field observed in a woman student of hysterical tendency. Translocation may be in any direction, and may be induced and sustained by movement of head, eyes or body ; new objects introduced into the field are not perceived, but may affect the brightness, colour and distance of the displaced images ; the functional condition of the eyes during translocation may be maintained, destroyed and reinstated at will ; the field may be moved at will in the direction of the third dimension, etc. The interpretation, roughly stated, is that during the time of displacement the retinas are insensitive to objective stimulation, and the subject sees an hallucinatory positive after-image of the objects primarily perceived. The writer seeks to work out this theory in neural terms.] **G. H. Mead.** 'Concerning Animal Perception.' [The author asks whether a line can be drawn between perception, not rational but intelligent, as displayed in the adaptations of crab or rat, and higher cognitive processes, or the consciousness of relation which makes human intelligence rational. Examining animal 'perception,' he finds that what appears in 'learning by experience' is a new stimulus for a preformed reaction, which up to the given and other like experiences had no determinate stimulus. He then turns to human perception, to find the core of thinghood to which varying sensory elements may be associated. This is discovered in contact sensations, Stout's 'manipulation'. The human hand thus plays a large part in perception ; it is very doubtful if chick, cat or dog, and doubtful if even the monkey has the isolated contact-material for building up perception. In conclusion, the author states that "any form that perceives is in so far carrying on a process of conscious mediation within its act ; and conscious mediation is ratiocination".] **E. H. Rowland.** 'A Study in Vertical Symmetry.' [A framed rectangle equally divided hori-

zontally tends to be seen as flat, and has very little 'picture' character; slightly unequal division lends itself to apperception of depth, and thus to associative interpretation as a picture.] **J. M. Baldwin**. 'Logical Community and the Difference of Discernibles.' [Any judgment, by reason of its community of intent, may be read as meaning more than one object, appearing to one person or many; one object only, appearing to one person or many; or one object only, appearing to one person only. The intent of community is the implication, in the rendering of an identical meaning by any one person, of other persons' judgment whoever they may be. The principle of identity of indiscernibles, psychologically interpreted, expresses the movement in community whereby like experiences of more than one object may yield an object identified as one. The correlative principle, of the difference of discernibles, expresses the movement in community whereby unlike experiences of one object may lead to its determination as more than one. —All this holds, primarily, of community-for-whom. If we add the mode of community-by-whom, we find that three modes of quantity may attach to judgments: quantity in extension, quantity in community-for-whom or community of appearance, and quantity in community-by-whom or in catholicity.]

The American Journal of Psychology. Vol. xviii., No. 4. **F. Kuhlmann**. 'On the Analysis of the Memory Consciousness for Pictures of Familiar Objects.' [Groups of simple pictures were laid before the observers for memorisation, and the power of recall was tested immediately, and at interval up to one month, the aim being to secure an introspective analysis of the memory consciousness. The results are treated under the headings: factors determining the order of recall; associations, their uses and changes; verbal imagery; visual antecedents. A special section is devoted to the function of visual imagery in the recall of the details of a picture (differences in first and last parts recalled; criteria of correctness; conscious changes of images; memory illusions). The writer emphasises the tendency of the imagery of the picture to change to the imagery of the object represented.] **L. W. Kline**. 'The Psychology of Humour.' [After a brief review of theories, and a classification of humorous stimuli, the author seeks to determine the nature and origin of humour as a mental process. Humour has two *differentiæ*: it is an end in itself, without practical interest in its object, and it implies a sense of freedom. It probably emerged as a distinctive process from states of inattentive freedom immediately following states of constrained attention. Its function is essentially social.] **A. F. Chamberlain**. 'Analogy in the Languages of Primitive Peoples.' [Shows, from the languages of the American Indians, how names are given to new and unfamiliar objects from analogy with the old and familiar.] **H. B. Davis**. 'The Raccoon: a Study in Animal Intelligence.' [Full report of observations and experiments. The animals are adroit, cunning, and gifted with high instinctive powers of attention and curiosity. The perfecting of the ability to undo fastenings is accomplished by a series of small changes, consisting chiefly in the omission of unnecessary movements and the combination of those required; experience with old fastenings holds over to trials with new: so Thorndike for rats; denied by Cole for raccoons; in course of time the animals reach a sort of generalised manner of procedure. Old animals learn more slowly than young, but profit more by their experience later. The learning-curves show, so far as comparison is possible, equal facility with monkeys (Kinnaman). Retention holds practically undiminished for more than a year. The raccoon, a nocturnal animal, is probably colour blind. No certain cases of imitation were

observed.] **E. C. Sanford**. 'Minor Studies from the Psychological Laboratory of Clark University.' **W. L. Gard**. 'XIX. A Preliminary Study of the Psychology of Reasoning.' [Report of the mode of solution of arithmetical puzzle problems. There is no evidence of the syllogistic form; the processes are associative and apperceptive, of the ordinary kind, working under the special conditions of attention. The almost successful solution of a problem induces a mental 'cramp'. Reasoning is often only obscure insight, or guesswork, with appeal to trial and error.] **M. K. Smith**. 'XX. On the Reading and Memorising of Meaningless Syllables Presented at Irregular Time Intervals.' [All observers tried to equalise unequal intervals, by premature enunciation, suspension of rhythm, mode of articulation, beating time, etc.] **A. E. Tanner**. 'Spinoza and Modern Psychology.' [In many respects (theory of will, doctrine that all consciousness is motor, etc.) Spinoza anticipates modern psychology.] **H. E. Houston** and **W. W. Washburn**. 'On the Naming of Colours.' [Report of tests with school children and college students. R, G, B have a broad range; G overlaps B, and B overlaps V.] Psychological Literature. Book Notes. Vol. xix., No. 1. **W. M. Wheeler**. 'Vestigial Instincts in Insects and Other Animals.' [The writer calls attention to such vestigial instincts as the honey-storing of the northern *Polistes*, and the sudden change in respiratory methods of the deep-water *Lymnæi* when transferred to shallow water. The vestigial instinct-action presents itself as an act of racial or phyletic memory, dependent on psychophysical dispositions abiding in latency; it shows that the capacities of even the lower organisms are greater than their ordinary routine behaviour might lead us to suppose. The subject is one for comparative, rather than for strictly experimental biological study.] **W. H. Burnham**. 'Attention and Interest.' [Interest is used to denote both a permanent habit of preperception and a temporary affective state of complex character. The relation of the latter to attention is in question. Attention is a reaction of the whole organism, comparable to the tropisms of plants and animals. An affective state is correlated with this reaction. It is more accurate to say that interest depends on attention than to make attention dependent upon interest.] **A. F. Chamberlain**. 'Notes on Some Aspects of the Folk-Psychology of Night.' [Notes on the ethnological and folk-lore material relating to night and the reactions to it on the part of civilised and uncivilised races; night and death, night as mother, as the time of evil, as the time for the consummation of marriage, as soother and counsellor, as bogey, etc.: night and meals, and hospitality, and work; nightmare, weatherlore of night, etc.] **F. B. Barnes**. 'Some Aspects of Memory in the Insane.' [Report of an experimental study. Increase in the number of nonsense-syllables in a series increases the number of repetitions required much faster in the case of the insane than in that of normal observers. Generative, effectual and retroactive inhibitions are more pronounced in their effect in the abnormal mind. There is much greater advantage in divided over massed repetitions for the insane. All sources of confusion and error work more markedly for the pathological mind.] **C. E. Ferree**. 'The Intermittence of Minimal Visual Sensations Studied from the Side of the Negative After-image.—I. The Fluctuation of the Negative After-image.' [In a previous paper the writer ascribed the fluctuation of minimal visual stimuli not to intermittence of attention, but to interruption of the process of adaptation by involuntary eye-movement. In the present study he attacks the problem from the reverse side. The theories of the intrinsically oscillatory character of the after-image process are considered, critically and experimentally, and found wanting. A long series of experiments is then adduced to

prove that the fluctuation depends on the causes previously alleged for peripheral sensation. Eye-movement acts, however, not directly but indirectly, by way of visual 'streaming,' the movement of some viscous, visually active material over the retina. The streaming phenomenon is described in detail.] **E. C. Sanford.** 'Minor Studies from the Psychological Laboratory of Clark University.' **T. J. Stevenson** and **E. C. Sanford.** 'XXI. A Preliminary Report of Experiments on Time Relations in Binocular Vision.' [Practically no interval at all can be inserted between the periods of excitation of the two retinas without destruction of stereoscopic relief. If the interval is long enough to prevent fusion of the stereoscopic diagrams, their parts are apperceived as in motion. As it is shortened, the relief appears to come in, not suddenly and in full amount, but gradually.] Discussion. **E. B. Titchener.** 'The Method of Impression and Some Recent Criticism.' [Defence of the method against Alechsieff.] Psychological Literature. Book Notes.

JOURNAL OF PHILOSOPHY, PSYCHOLOGY AND SCIENTIFIC METHODS. iv., 23. **G. S. Fullerton.** 'The Doctrine of the Eject.—III.' [Argues that the analogical inferring of other minds is as "rational" as any inference can be, and not to be set down to 'instinct'.] **P. Hughes.** 'Concrete Conceptual Synthesis.' ["Whereas in the sciences of generalisation, the more highly organised the science, the poorer the concept of any *object*, to which the generalisations apply. in the sciences of concrete conceptual synthesis, the concept and definition of an object are the richer the more organised, historical and geographical science becomes."] **B. C. Ewer.** 'The Anti-realistic "How?"' [*Viz.*, as to how consciousness can transcend itself. "There is certainly no satisfactory answer," but the question should not be asked. Admits among the difficulties inherent in the conception "the fact that the transcendence of the true perception seems not to differ psychologically from the spurious transcendence of the false one".] iv., 24. **A. E. Davies.** 'Imagination and Thought in Human Knowledge.' [Desiderates a conception of the imagination "in such a way that it may serve as an instrument of truth".] **S. I. Franz.** 'Psychology at Two International Scientific Congresses.' [Heidelberg and Amsterdam.] **W. T. Bush.** 'Sub Specie Aeternitatis.' [A spirited and readable attack on the pedantic devotion to defunct problems which is traditional in philosophy.] iv., 25. **M. W. Calkins.** 'Psychology: What is It about?' ["In so far as it is the science of mental function, it is necessarily the science of the mental functioner."] **E. B. McGilvary.** 'Realism and the Physical World.' [States four criteria of the 'independent' realities which idealist and realist alike believe in and points out that they are all pragmatic. "Immediate experience furnishes the *qualia* from among which the pragmatic criteria help us to pick out some which can be consistently assumed to have independent reality."] iv., 26. **G. Vailati.** 'The Attack on Distinctions.' [Shows that "the various methods employed by philosophers for the criticism of distinctions . . . lead to a result diametrically opposite to the one at which it aimed, *i.e.*, lead to the increase rather than the decrease in the number and importance of the distinctions concerned".] **S. E. Lang.** 'Logic and Educational Theory.' [Criticises a review by J. G. Hibben.] v., 1. **A. E. Lovejoy.** 'The Thirteen Pragmatisms.—I.' [See below.] **M. W. Calkins.** 'Psychology as Science of Self.—I. Is the Self Body or Has it Body?' [It *has*.] v., 2. **A. E. Lovejoy.** 'The Thirteen Pragmatisms.—II.' [A tabulation of doctrines enunciated (or said to be so) by various pragmatists, followed by a demand that they be distinguished by different

names. The unlucky number is however arrived at by an enumeration which is not exhaustive—there is, for example, no reference to the pragmatic account of verification and error, nor to the fact that the pragmatic doctrine of truth is essentially a criticism of older notions on the subject —while the logical connexions between the doctrines enumerated are not brought out adequately. Nor does the writer propose any remedy for the defects in the nomenclature he has discovered, or himself make use of the existing distinction between 'pragmatism' and 'humanism'.] **G. P. Adams.** 'Sub specie Aeternitatis.' [*Cf.* iv., 24.] v., 3. **A. B. D. Alexander.** 'Kuno Fischer; an Estimate of His Life and Work.' **M. W. Calkins.** 'Psychology as Science of Self.—II. The Nature of the Self.' [It is persistent, inclusive, unique, related.] **M. Prince.** 'Prof. Pierce's Version of the late "Symposium on the Subconscious".' [Shows that he has misrepresented Janet, and relates some interesting experiments to prove the existence of a coactive consciousness.] v., 4. **J. Dewey.** 'What does Pragmatism mean by Practical?' [Taking Pragmatism as a method it will apply equally, but variously, to objects, ideas and truths, with corresponding shades of 'practical'. James asserts all three, but does not distinguish them enough, his chief aim being to deny that truths are *a priori* and eternal, and that their value is static and not dynamic. He tends however to make unpragmatic assertions when over-generously appreciating the working value of his opponent's views. But he is right in emphasising the personal factor found in truth-evaluations, the failure to recognise which has hitherto led to "that dishonesty, that insincerity characteristic of philosophic discussion". To admit this will involve much searching of hearts, but will some day "be accounted unto philosophy for righteousness' sake".] **A. R. Gifford.** 'The Pragmatic Ὕλη of Mr. Schiller.' [The doctrine that 'reality is experience' is inconsistent with that of an indeterminate ὕλη. The latter too is self-contradictory since "sheer potentiality possessed of no characteristics is essentially unreal". But there is no attempt to show that ὕλη has been asserted to be 'reality' in the sense required by the argument.] v., 5. **M. W. Calkins.** 'Psychology as Science of Self.—III. The Description of Consciousness.' [Argues that "the merely structural psychologist's treatment of emotion, thought, recognition, etc.," is inadequate.] **J. B. Pratt.** 'Truth and Ideas.' [Declares the ambiguities of 'truth' to be a disgrace to philosophy, rejects its identification with 'reality' and objects to its identification with 'known fact'. The real question is as to what makes a belief 'true' rather than 'false'. (1) The common answer is that your thought is true, if the object of your thought is as you think it. There is also (2) Radical Pragmatism, for which truth does not transcend the individual experience, and (3) a view cited from James which speaks of 'objects really there'. (3) Appears indistinguishable from (1), while 'true' and 'false' are not rightfully applicable to 'plans of actions' and inventions at all.] v., 6. **A. H. Lloyd.** 'The Meaning of $\sqrt{-1}$.' [It is 'only an application of the negative to the sphere of products or areas,' but with the 'qualification' that the notion is only relatively true.] **B. H. Bode.** 'The Problem of Objectivity.' [A destructive criticism of the 'new realism' as presented by W. P. Montague in IV., 4 and 14, both in its details and in principle. It is pointed out that in general it must assert (1) the possibility of emotions without awareness, and (2) the same validity for all our perceptions and thus destroy the possibility of error. The doctrine thus logically leads to Berkeleyanism rather than to 'panobjectivism'.] v., 7. **J. E. Boodin.** 'Consciousness and Reality.—I. Negative Definition of Consciousness.' [Consciousness is not an energy nor a relation nor a thing, but 'a

non-stuff dimension of reality'.] **W. James.** '"Truth" *versus* "Truthfulness".' [A proposal to reserve the term 'truth' for the abstract intellectualist use, and to denominate 'truthfulness' the concrete pragmatic sense of the term.] **W. T. Bush.** 'Provisional and Eternal Truth.' [A reply to Adams's criticism in v., 2 of article in iv., 24.]

International Journal of Ethics. Vol. xviii., No. 2, January, 1908. **R. Balmforth.** 'The Moral Development of the Native Races in South Africa.' ["The State should impose a special educational tax on natives, the proceeds of which should be devoted exclusively to native elementary, industrial, and higher education, and particularly to the establishment of industrial institutes. The organisation and management of the schools and institutes should be placed in the hands of representative boards, to which the mission school and institutes might be transferred."] **J. A. Ryan.** 'Is Stock Watering Immoral?' ["Stock watering is typical of almost all the improper practices of corporations. It is typical because it is essentially an attempt to get excessive and unjust profits on capital."] **C. Holcombe.** 'Oriental Ethics Compared with Western Systems.' [An account of the Taoist and Confucian Ethics as formulating opposed yet complementary moral codes.] **E. Boutroux.** 'The Psychology of Mysticism.' [Regarding mysticism as "a life, a movement, a development with a definite character and direction," endeavours to mark the different stages of this development, and to determine the significance and value of mysticism as bearing on the life and destiny of individuals and of humanity.] **C. W. Super.** 'Motive in Conduct.' [Shows by a scientific examination of concrete cases the variety of dominant motive there is in the action of different individuals.] **I. W. Howerth.** 'The Social Ideal.' [The social ideal must be constructed on the basis of the actual state of society. Such an ideal consists of three mutually involved elements—social intelligence, social economy, and voluntary co-operation.] **C. T. Burnett.** 'A Fundamental Test for Determinism.' [Argues against necessarianism by propounding the question: "What is the effect upon the validity of the reasoning process by which determinism arrives at its conclusions, if we acknowledge that those conclusions are true?"] Book Reviews.

The Sociological Review. Vol. i., No. 1, January, 1908. London: Sherratt & Hughes. This new Quarterly takes the place of the annual "Papers" of the Sociological Society. The intention of the change, as explained by the Editor in his very able editorial, is to secure greater continuity of treatment and more scientific scope, as well as to put the work of the Society on a permanent footing and render it more accessible. The price is to be 2s. 6d. net quarterly. Annual Subscription, post free, 11s. 6d. The contents are varied and interesting. The Editor, **Prof. L. T. Hobhouse,** states that the function of a sociological journal is to assist in the work which General Sociology has to do, in bringing the work of specialists together and in affording facilities for the discussion of the broad sociological bearing of each specialistic investigation. **Prof. E. Westermarck.** 'Suicide. A Chapter in Comparative Ethics.' [Gives an interesting survey of the facts regarding suicide and the extreme variation of moral judgment regarding the deed.] **Rev. W. D. Morrison, LL.D.** 'The Criminal Problem.' [Crime much more a social than a penal problem. Changes in the penal law will have comparatively little effect on the amount of crime.] **R. R. Marett.** 'A Sociological View of Comparative Religion.' [Comparative Religion a branch of empirical science; its method primarily that of Social Psychology, qualifying its attention to the Social Subject by a secondary attention to Individual

Psychology and Social Morphology.] **H. A. L. Fisher.** 'The Sociological View of History.' [Anthropology supplies hints of living and shaping influences, but no adequate account of their operation. Such an account can only be obtained by historical investigations.] Discussions: **Prof. P. Geddes.** 'The Survey of Cities.' **W. H. Beveridge.** 'The Unemployed Workmen Act in 1906-7.' Reviews of Books, Periodical Literature, Books Received, Notices.

Revue de Métaphysique et de Morale. 16e Année. No. 1. Janvier, 1908. **Émile Boutroux.** 'William James et l'expérience religieuse.' [Admirable analysis of Prof. James's *Varieties of Religious Experience*, with critical comments. Difficulty of treating mysticism as "experience": it lacks the necessary duplication of the subject. Besides how effect the transition from subjective to objective? Questionable to make personal religion its only living and efficacious form. If feeling is the soul of religion, institutions are its body, and it is doubtful if it could survive their disappearance.] **H. Bergson.** 'À propos de "l'Évolution de l'intelligence géométrique".' [Reply to M. Borel.] **E. Bouasse.** 'Évolution de la matière et physique des corps solides.' [No satisfactory theory of solids as yet exists.] **G. Dwelshauvers.** 'De l'intuition dans l'acte de l'esprit.' [All thought is the analysis of an intuition. The unity in an act of the spirit is not logical but prelogical. Genius depends on intuition. The belief in an external world is based upon the act which affirms the existence of subjects, and it is only in the development of this act that logical reasons appear.] Études Critiques: **G. Cantecor.** 'Étude de morale positive par M. Belot.' **D. Parodi.** 'Le pragmatisme d'après MM. W. James et Schiller.' Discussions: **M. Winter.** 'Sur la logique du Droit.' [Réponse a M. Mallieux.] Questions Pratiques: **P. Bureau.** 'Le droit de grève et la liberté du travail.' Supplement: Troisième Congrès international de philosophie. Nécrologies, Livres, etc.

Revue de Philosophie. 1er Janvier, 1908. **G. Dromard.** 'Motor Elements of Æsthetic Emotion.' [A work of art moves us mentally to complete it; this is the suggestiveness of art; its limits.] **E. Peillaube.** 'The Organisation of Memory.' [The action of time on memories.] **J. Martin.** 'A History of Æsthetic Ideas.' [On a Spanish work by Dr. Menendez, dealing with the æstheticism of Schiller, Goethe, Richter, the two Schlegels, Schelling, Hegel, Hartmann, and others.] **O. Hamelin.** 'Aristotle; Physics II., Translation and Commentary: Essay on the Principal Elements of Representation.' [Sorbonne thesis for the Doctorate of Letters, pronounced by the judges to mark an epoch in Philosophy.] **E. Baron.** 'Dr. Rashdall on the Theory of Good and Evil.' [An intelligent and kindly review.] 1er Fevrier, 1908. **P. Borrell.** 'The Idea of Democracy.' [Democracy is "that social organisation which tends to heighten to the uttermost the civil conscience and responsibility of each individual". It is "the access of all citizens to the trade of a king". When a people recognises its incapacity of governing itself, the most democratic thing it can do is to set up a monarch.] **C. de Beaupuy.** 'St. Anselm's Argument is *a posteriori*.' [The celebrated proof of the existence of God from our conception of a Being than which nothing greater can be thought, is said to rest on what is called the argument from degrees of perfection, which is that finite perfections imply infinite perfection somewhere, which argument is said to be *a posteriori*. Not clear.] **P. Duhem.** 'Absolute and Relative Movement.' [The mediæval opinion that there can be no local movement except in reference to some fixed body; also the question as to the place of the outer surface of the universe.] **S. Rome.** 'The Dualism of Pascal.' [Dualism here means

the synthesis of two opposite positions. Throws great light on Pascal.] **P. J. Cuche.** 'The Value of Experiment in Psychology.' [A review of an Italian work by Dr. Gemelli. Judicious.] 1er Mars, 1908. **A. Sertillanges.** 'The Soul and Life According to St. Thomas Aquinas.' [There is a natural unity of soul and body as of form and matter. "The idea of the soul raising the arm and swinging the legs by an action of its own is the idea of a savage."] **T. Richard.** 'School Teaching and the Progress of Science.' [The good and evil of the Manual or Text-book. It is a necessity of teaching, it registers discoveries, but makes none. A teacher should write Articles away from his Manual.] **P. Duhem.** 'Absolute and Relative Motion.—v.' [The fourteenth century Schoolmen on Place. "Ockham taught that there is nothing real or positive in the notions of Point, Line, Surface. The only Reality is Volume of three dimensions. Surface is a pure negation, the negation of the volume of a body extending beyond a certain term; the line is the negation of the extent of a surface passing a certain frontier; the point is the negation of a line being prolonged beyond a certain limit."] **F. Warrain.** 'Pure Reason and Antinomies.' [Review of a book so entitled by F. Evellin, Paris, Alcan. The author resolves the four Kantian antinomies into theses and antitheses, the theses the work of reason, the antitheses, that of imagination; the theses having for their object the real, the antitheses the sensible.]

Revue de Philosophie. 1er Avril, 1908. **J. Gardair.** 'Fogazzoro and Rosmini.' [Fogazzoro, author of *Il Santo*, and of *Human Ascents, Evolutionism and Catholicism*, wrote also *The Figure of Antonio Rosmini*, who, he says, considered "that all nature is animated, that there is in it a perfect continuity, that elementary life rises to organic life, and organic life, step by step, to species higher and higher; that, when the organism predisposed to humanity reaches its highest perfection, a divine ray of truth presents itself to it and gives it intelligence". On this the reviewer remarks: "the end of this essay is to show at once the beauty and the insufficiency of this system".] **L. Billia.** 'The Object of Psychology.' ["The true, sole object of Psychology is the Ego. No internal fact is observable or conceivable except on condition of being a fact of the Ego. Further, since of sensible things, or what are called external facts, nothing is apprehended except on the title of perception, the other series of facts, movements, the external world, so far as we seize them, are also reducible to states and modes of the Ego. All descriptive sciences meet in psychology."] **E. Peillaube.** 'The Organisation of Memory: the calling up of Recollections.' **P. Duhem.** 'Absolute and Relative Movement.' [How a Paris doctor of the fourteenth century, Jean de Jandun, argues from the essential notion of Place that it is beyond the power even of Omnipotence to move the Earth.] 1er Mai, 1908. **Editorial.** 'Programme of Studies on the Problem of Knowledge.' [Promises a series of Articles on Epistemology, intellectualist and objectivist, on the basis of Aristotle and St. Thomas. "Pragmatism, which is essentially anti-rational, dissolves the notion of truth, confounding it with its practical consequences, that is to say, with utility, and, in spite of the noblest efforts, replunges us into scepticism. It is irreconcilable with the Catholic religion, and also, as M. Poincaré says, with Science."] **J. Martin.** 'A Poet Philosopher.' [M. Sully-Prudhomme. "This Essay was shown to Sully-Prudhomme about two months before his death; he recognised in it a faithful exposition of his thought."] **P. Duhem.** 'Absolute and Relative Motion.—VII.' [Opinions of Albert of Saxony, a Parisian doctor of the fourteenth century, a follower of Ockham: that the place of a thing is the body that

bounds it; that a thing may have any number of places, as many as it has containing bodies, one outside the other; that the place of a thing may change without the thing itself moving, *e.g.*, the towers of Notre Dame swept by the wind; that the universe, having no containing body, has no place; that therefore it cannot move locally; that no fixed origin of co-ordinates can be found, to which to refer the motion of the universe; that, nevertheless, God can transfer the universe, which translation will not involve any change of extrinsic relation to a given point, but will be a change wholly intrinsic. At the back of this and similar mediæval discussions is the Aristotelian question, Must the earth be fixed for the heavens to move?]

Archives de Psychologie. Tome vii., No. 2. **T. Flournoy.** 'Automatisme téléologique antisuicide: un cas de suicide empêché par une hallucination.' [After recalling the well-known case of Benvenuto Cellini, the writer reports a similar case, in which the intention of suicide by drowning was frustrated by the apparition of a friend. Analysis brings out four necessary conditions: an imaginative, somewhat neuropathic temperament, subject to temporary dissociations; a tendency to optimism; a collocation of depressing circumstances; and moral isolation, the absence of any intimate friend.] **E. B. Leroy.** 'Escroquerie et hypnose; escroqueries prolongées pendant plusieurs mois à l'aide de manoeuvres hypnotiques pratiquées sur une des victimes.' [The case has three stages: a period of resistance on the part of the victim; a period in which domination is attempted by way of rappings, movements of furniture, etc.; and a period in which recourse is had to mysterious voices and the induction of hypnosis. The author rightly remarks that such cases of swindling by hypnotic influence are rare.] **M. Métral.** 'Expériences scolaires sur la mémoire de l'orthographe.' [Experiments show that it matters little for memorisation of the spelling of a word whether it is enunciated to the pupils letter by letter or syllable by syllable. The important thing is to bring into play all the verbal memories, and especially the visual; the sound and sense of the word must be associated to its visual physiognomy.] **C. G. Jung.** 'Association d'idées familiales.' [Members of the same family tend towards the same type of ideational association. Thus, with a possible maximal difference of 13·3 per cent., the average difference for non-related males is 5·9, for related only 4·1 per cent.; for non-related females, 6, and for related only 3·8 per cent. The difference between husband and wife is 4·7 per cent.] **E. Claparède.** 'Quelques mots sur la définition de l'hystérie.' [Discusses previous views, with special reference to Babinski. Defends the thesis that hysteria is "un édifice à plusieurs étages," and offers a typical schema. The primary neurosis of infantile mentality and disposition to play a part leads to secondary symptoms, inhibitory (amnesia, etc.), and positive (vomiting, vasomotor disturbances; simulation, lying). The inhibitions lead on to tertiary disorders: double personality, derangements of association. The 'secondary states' again lead on to increased suggestibility and disorders due to suggestion, fourth and fifth stages respectively.] Recueil de faits: documents et discussions. **P. Bovet.** 'Note sur un rêve.' **E. Claparède.** 'Exemple de perception syncrétique chez un enfant.' [A child of four is able to find the song he desires in his music-book by the general appearance of the score: memory is perfect after six months.] **R. Penel.** 'Science et athéisme.' [Critique of Le Dantec.] **A. Lemaitre** and **A. Fleury.** 'Une opinion sur les peintures de H. Smith.' [Only the chalk head of Christ has artistic value.] **A. Elmer.** 'VIe Conférence suisse pour l'éducation des anormaux, Soleure, 1907.' Bibliographie. Notes diverses. Tome vii., No. 3.

**D. Katzaroff.** 'Expériences sur le rôle de la récitation comme facteur de la mémorisation.' [When we are learning anything by heart, we instinctively pause to say it over to ourselves from time to time. Experimental results prove that we are well advised. The saying over has a fixative effect distinctly superior to that of ordinary reading: although all that can be said, quantitatively, is that this superiority varies with the number and distribution of the repetitions as compared with the readings. Psychologically, the repetition furnishes a control of memorisation; it puts the observer in a state of active attention, and arouses the implied affective processes; and it familiarises him with the aspect of the detached inducing word or syllable. Physiologically, repetition involves cortical paths and centres distinct from those of reading.] **G. Rouma.** 'Un cas de mythomanie: contribution à l'étude du mensonge et de la fabulation chez l'enfant.' [Full report of the case of a five-year-old boy, with tales, drawings, account of heredity and environment, and suggestions for special education.] **A. Maeder.** 'Nouvelles contributions à la psychopathologie de la vie quotidienne.' [Notes on a number of incidents treated by Freud's method of psychoanalysis, and arranged under the headings of forgetfulness and confusion, lapsus calami and linguae, unconscious affective reaction, sexual fetichism and symptomatic actions.] Recueil de faits: documents et discussions. **E. Lombard.** 'Faits récents de glossolalie.' [Critique of the experiences and reports of Büsching and Paul.] Bibliographie. Notes Diverses.

Revue Néo-Scolastique. Février, 1908. **Cardinal Mercier.** 'Address to the University of Louvain.' [Modernism an outcome of Kantism.] **C. Sentroul.** 'Truth in Art.' ["Art always idealises, but sometimes, owing to the beauty ready-made of the model and the quasi-exactitude of the data, art neither exacts nor manifests the labour of idealisation which characterises it."] **J. Lottin.** 'Moral Statistics and Determinism.' [Antideterminist.] **N. Balthasar.** 'The Problem of God according to the New Philosophy.' [Sets aside M. Le Roy's proofs of the Divine Existence drawn from the System of Immanence.]

Zeitschrift für Philosophie und Philosophische Kritik. Bd. cxxxi., Heft 2, 1908. This is a Schelling number of the *Zeitschrift*, being ornamented with a portrait of the philosopher and containing three articles devoted to his teaching; the first is by **O. Braun.** 'Die Entwickelung des Gottesbegriffes bei Schelling.' [The Absolute or God is the central concept of Schelling's philosophy and determines all its modifications. In his first or Fichtean period it is practically identified with the unconscious creative ego. Under the impulse of physical studies nature next comes to be conceived as an effort towards self-consciousness. The problem is to think of representations as adjusting themselves to objects, and of objects as simultaneously adjusting themselves to representations. It is solved by making the two processes manifestations of a single unconscious energy, partially revealed in history, perfectly revealed in the creative activity of art. From this to neo-Spinozism is an easy transition. At this stage God is the All-One, the universe viewed as a totality. Then under the lead of the mystic Franz Baader a new direction is given to his thoughts, resulting in a confused theosophy of which Braun seems not prepared to decide whether it involves a personal God in the ordinary sense, but which, according to him, includes a large element of pessimism.] **W. Kinkel.** 'Schelling's Rede: über das Verhältniss der

bildenden Künste zur Natur.' [Schelling treated nature as an unconscious work of art, and he did a real service to artists by referring them to nature instead of to the antique, besides writing very beautifully on the subject of æsthetics; but he failed to construct an æsthetic theory, and his particular judgments are open to serious question.] **Anton Korwan.** 'Schelling und die Philosophie der Gegenwart.' [Schelling totally failed to explain the world by metaphysical methods. But his works are well worthy of being studied by contemporary metaphysicians—especially now that a convenient selection from them has been brought out by the publisher of the *Zeitschrift*.] **H. Schwarz.** 'Ein markantes Buch in der neu-idealistischen Bewegung.' [A highly laudatory review of a volume of essays by F. J. Schmidt advocating the abandonment of modern scientific methods in favour of speculative idealism.] **R. Falckenberg** and **J. Walter.** 'Nachtrag zu dem Necrolog auf L. Busse.' Rezensionen, etc.

Zeitschrift f. Psychologie. Bd. xlvi., Heft 1. **R. von Sterneck.** 'Die Referenzflächentheorie der scheinbaren Grösse der Gestirne.' [Outline of the author's theory, as given in his work *Der Schraum auf Grund der Erfahrung;* reply to Müller's criticism in vol. xliv.; critique of Deichmüller's experiments.] **L. Török.** 'Über das Wesen der Juckempfindung.' [Report of experiments which show that the sensation of itch derives from a weak stimulation of those cutaneous nerve-endings whose stronger stimulation produces the sensation of pain; that these nerve-endings are not identical with the organs of touch or temperature; and that the sensation of itch involves the stimulation of the free inter-epithelial nerve-terminations.] Besprechungen. [Öffner on Stumpf's *Erscheinungen u. psychische Funktionen* and *Zur Einteilung d. Wissenschaften;* Cohn on Lipps' *Aesthetik*, ii.] Literaturbericht. **G. E. Mueller.** 'Gesellschaft für experimentelle Psychologie.' Bd. xlvi., Heft 2. **E. Becher.** 'Das Gesetz von der Erhältung der Energie und die Annahme einer Wechselwirkung zwischen Leib und Seele.' [There can be no doubt, after the experiments of Rubner and Atwater, that the law of the conservation of energy holds for psychophysical organisms, man included. The interactionist, who is bound to accept this fact, then has two principal paths open to him. He may postulate a psychical energy (or energies). But this assumption simply saves the constancy of the sum of physical and psychical energies, whereas experience shows an equality of intake and outgo of physical energy: it is only by forced hypotheses that the two points of view can be brought into accord. Or he may postulate an interaction which does not involve change in the amount of physical energy. This, the double-cause and double-effect theory, is the most attractive form of the interaction theory, and the form in which it stands nearest to parallelism. It is, however, open to objection, since it makes the psyche choose those relatively infinitely rare modes of operation which leave the law of conservation unaffected. On the whole, then, the law of conservation tells for parallelism.] **R. Herbertz.** 'Überblick über die Geschichte und den gegenwärtigen Stand des psychophysiologischen Problems der Augenbewegung.' [The earlier investigators were in search of a principle of eye-movement: a physiological, as expressed in the Donders-Listing law; a mechanical, as expressed in Wundt's law of least muscular exertion; or a psychological-epistemological, as expressed in the Meissner-Helmholtz law of easiest orientation. Recent work has raised the question, more generally, of the function of eye-movements in visual perception at large, with the result (in studies of reading) that the movements are not continuous but jerky, and that we see only in the pauses. Hence we may reverse Hering's

dictum, and say that vision with the moved eye hardly comes into consideration for perception; true visual cognition means an eye at rest.] Literaturbericht. Bd. xlvi., Heft 3. **M. Pappenheim**. 'Merkfähigkeit und Assoziationsversuch.' [The writer describes his method of direct repetition, in which a word is called to the observer, and the association-time measured; then the same word is called a second time, and the association experiment repeated; and finally in the event of different associations the observer is asked to reproduce his first association. Instances are given of the application of the method to normal persons, to hystericals, and to the mentally deranged. The normal results show that different associations occur most frequently with the slower reactions, and that they are more easily forgotten than the identical associations: this agrees with Jung's statement that delayed associations are more readily forgotten than those of normal duration.] **R. Baerwald**. 'Die Methode der vereinigten Selbstwahrnehmung.' [A defence of the questionary method. On the formal side, the gift of observation (sustained attention and reserve in judgment) is not the peculiar property of the trained psychologist, while its material requirement (familiarity with the subject-matter) may be fulfilled at the time that the method is employed. Elementary psychology relies upon experiment; the psychology of the higher processes may turn to the questionary. Care must be exercised in the choice of persons tested; technical questions should be introduced by an explanatory essay; if the question is vague and its precise formulation involves suggestion, alternative theories should be given side by side; conclusions may be drawn only where there is independent evidence from numerous sources; anything that smacks of emotion is to be ruled out; only concrete answers are to be accepted; and the questionary-sheet is to be supplemented by private interview or personal correspondence.] Literaturbericht. Bd. xlvi., Heft 4. **R. Müller-Freienfels**. 'Zur Theorie der Gefühlstöne der Farbenempfindungen.' [Simple colour-feelings are difficult to investigate, partly on account of complication by feelings of a higher order, partly because there is no simply based colour harmony. The writer gives a brief (and incomplete) review of the observations so far made, and then offers a dynamic theory in terms of the metabolic (assimilative and dissimilative) processes in the retina and its adnexa. The organ needs stimulation: hence our pleasure in bright light and glitter. Preference for single colours seems to depend upon structural differences in the receptive apparatus; in general, however, the brighter colours are the more pleasing. The pleasingness of the combination of neighbouring colours (law of small intervals) depends on the unity of the effect produced; it is in part due to spatial factors (relief). Combinations of more widely separated colours are pleasing when the various retinal processes are thrown into equal or balanced activity. Our pleasure in high degrees of saturation is largely an intellectual matter; they are striking, decided, while the unsaturated tones are obscure, dirty.] **R. Herbertz**. 'Die angeblich falsche Wissenstheorie der Psychologie: ein Protest.' [Detailed critique of Prichard's *A Criticism of the Psychologist's Treatment of Knowledge*, Mind, xvi., 27 ff.] Literaturbericht. Bd. xlvi., Heft 5. **G. Heymans und E. Wiersma**. 'Beitrage zur speziellen Psychologie auf Grund einer Massenuntersuchung.—iv.' [In order to meet the objection that their questionary returns had been furnished almost entirely by men, the authors gathered new material from women reporters, and here give such of their results as bear upon the characteristics of the sexes. They find precisely what they found before: that women are on the average more active, more emotional and less egotistic than men. Their previous conjecture, that the intellectual insufficiency of women depends on emotivity and ten-

dency to the concrete, is also confirmed.] **M. Frischeisen-Köhler.** 'Über die psychologischen und die logischen Grundlagen des Bewegungsbegriffes.' [Hamann's conclusions in vol. xlv. are due to his exclusive operation with the psychological bases of the concept of motion and his neglect of its logical motives. Mechanics, *e.g.*, treats of motion under two headings, kinematics and dynamics: for the former the relativity of motion is axiomatic, while in the latter the principle is still in dispute. Psychology is here in place only as the individual psychology of the great physicists themselves. Again, an 'isolated body' is for psychology an easily realisable fact; for physics it is always a theoretical fiction. Yet again, a motion may be present physically where the visual perception of movement is absent (rotating wheel); and the physical conception of 'energy' of motion has nothing to do with organic sensations and the 'feeling of resistance'. Finally, physical concepts have objective existence; they refer to facts (*Sachverhalt*) which can be apprehended and measured independently of any sensory experience.] **K. Marbe.** 'W. Wundts Stellung zu meiner Theorie der stroboskopischen Erscheinungen und zur systematischen Selbstwahrnehmung.' [The writer explains stroboscopic phenomena from Talbot's law and from the observation that phases of a movement may be omitted without our noticing their loss. Wundt has recourse to positive after-images and to the mental process of assimilation. Yet Wundt, so to say, forbids the testing of his own theory by declaring that systematic introspection, the result of what he terms the *Ausfragemethode*, is inadmissible. Linke, the latest writer from the Leipzig laboratory, is guilty both of misunderstanding and of error in fact.] Literaturbericht. Bd. xlvi., Heft 6. **R. Saxinger.** 'Gefühlssuggestion und Phantasiegefühl.' [In suggestion "wird ein Dasein oder ein Sosein durch Annahme oder Urteil erfasst"; suggestibility is, however, in part a matter of image-endowment. In accordance with this definition, affective suggestion can appear only in two cases: when an intellectual phenomenon is unaccompanied by feeling, and the feeling is brought in by suggestion (or contrariwise), and when the feeling which ordinarily accompanies such an intellectual phenomenon is modified by suggestion. Practically, the range of this mode of suggestion is somewhat limited. It operates by way of the phantasy feelings (Meinong), which stand to feelings proper as assumption stands to judgment. Mere desire for a certain kind of feeling, without the intervention of the phantasy feeling and the suggestive process (Ehrenfels), is inadequate. The phantasy feelings themselves cannot be produced, but may be abolished, by suggestion.—The paper ends with a reply to Dürr's critique of the doctrine of phantasy feelings.] **W. Wirth.** 'Erwiderung gegen K. Marbe.' [The part played by assimilative processes in stroboscopic observations is attested by tachistoscopic experiments with defectively printed words.] Literaturbericht.

Archiv f. d. gesamte Psychologie. Bd. ix. Heft 2 und 3. **T. Lipps.** 'Psychologie und Aesthetik.' [Defence of the author's definition of æsthetics as the "psychology of the beautiful and of art". Beauty is that character in virtue of which an object lays claim to a certain sort of valuation from the observer. Since æsthetic valuation always and only occurs in consciousness, every æsthetic problem is at the same time psychological. But more: psychology includes æsthetics. For that which makes the object beautiful (the subject-matter of æsthetics) is also that or a factor in that which determines æsthetic valuation in individuals; psychology therefore considers objects in so far as they lay claim to valuation. Further, when we speak of a 'beautiful object' or of a 'work of art,' we imply that something

is given which demands æsthetic valuation, and that the human mind is also present with the demand that from this something given the work of art shall be created; thing and mind are alike essential. We may look at the body of the work of art, so to say, and we have a sense-perception; we may look at its soul, and we have æsthetics; we may treat of body and soul together, and we have the history of art. What holds here of æsthetics holds also of logic and ethics. All three are normative sciences; the norm is the law of the creative or constructive mind; and individual judgments, volitions, valuations are the resultant of this norm and of subjective or individual factors. Psychology, treating the norms as facts, becomes in that sense a normative science, and also enters on the path which leads to natural laws of mind, of the same order with the laws of the physical universe.] **E. Meumann**. 'Über Assoziationsexperimente mit Beeinflussung der Reproduktionszeit: eine Mitteilung.' [Observers are of two main types: those who react quickly, with the first word that occurs to them, and those who react slowly, after accurate appreciation of the stimulus and of the relation to it of their response. If told to react as quickly as possible, the former obey readily, while the latter require practice and repeated suggestion; if told to follow instructions exactly, the latter obey readily, while the former lengthen their times but do not improve the quality of their answers. Hence an instruction which refers both to time and to quality is to be avoided; the results will betray a confusion of the two typical attitudes.] **H. J. Watt**. 'Über den Einfluss der Geschwindigkeit der Aufeinanderfolge von Reizen auf Wortreaktionen.' [The number of completed reactions decreases proportionally to the logarithmic increase of the rapidity of succession of the stimulus words; complete series were obtained, from various observers, between the limits 1,160 and 6,770 $\sigma$; the intervals described as pleasant varied from 800 to 2,140 $\sigma$. Where reaction words are often repeated, the distance most frequently separating them is one series; this frequency decreases, at first very quickly and then slowly, with increase of distance. Or, in terms of time, repetition occurs most frequently within 6 min., and (without special reason) rarely after 30 min. The repeated words indicate the sense-preferences of the reactors. The experiments show that increase of rate of presentation does not bring into play the stronger tendencies to reproduction; on the other hand, they throw no clear light upon the tendency to persistence, which must therefore be studied as heretofore in memory-work with nonsense syllables and in psychiatry.] **W. Specht**. 'Die Beeinflussung der Sinnesfunktionen durch geringe Alkoholmengen. 1 Theil: Das Verhalten von Unterschiedsschwelle und Reizschwelle im Gebiet des Gehörssinnes. Preisgekrönte Arbeit.' [Alcohol raises the difference limen, and lowers the stimulus limen; these effects are parallel both in degree and in temporal course. Amount of alcohol conditions only degree of change: this depends also on individual sensitivity. Finally, there is complete accord between the objective record of the alcoholic effect and the introspection of the observers. In work on the difference limen with small amounts of alcohol, there is a tendency to give judgments of equality; with larger amounts, the second sound is always judged to be the louder. This result points to a twofold narrowing of consciousness: first, it is completely taken up with current sense-impressions, so that the function of comparison is inhibited; secondly and rather paradoxically, it is concentrated upon the single impression, to the exclusion of concomitant disturbances. The lowering of the stimulus limen depends partly on increased excitability, partly on this narrowing of consciousness.] Literaturbericht. [Klemm on Lipps'

*Leitfaden.*] Referate. Bd. ix., Heft 4. **K. Buehler**. 'Tatsachen und Probleme zu einer Psychologie der Denkvorgänge.—1. Über Gedanken.' [An attempt, in continuation of the work from Marbe to Messer and on the basis of experiments in the form of question and answer, to define and classify 'thoughts,' regarded as mental elements, ultimate units of our thinking experiences, on a par with but altogether different from 'sensations'. Three main types of thoughts are distinguished: the consciousness of rule, the consciousness of relation, and the comprehensive but apparently objectless meaning or 'intention'. Further analysed, every thought proves to have two aspects: the 'what-determination' of the thought content and the reference to the object. The latter may be termed intention in the narrower sense; the former may be a group of ideas, consciousness of rule, of relation, etc., or (in the case of intentions in the wider sense) place-determination within a conscious arrangement. As an inclusive term for this manifold of modifications of consciousness, over against sensation (*Empfinden*), we may use knowledge (*Wissen*).] **V. Benussi**. 'Zur experimentellen Analyse des Zeitvergleichs.—1. Zeitgrösse und Betonungsgestalt.' ['Empty' times may present three different objects to consciousness: the complex of limiting noises, the length of time included between these, and a subjective form of accentuation. Introspection shows that the first object is prominent in the case of short times (say, 360 $\sigma$) and the second in the case of long times (1,440 $\sigma$). Hence the validity of comparison and the direction of errors must be essentially determined, for short times, by the quality of the limiting sounds, whereas the estimation of length of time as such appears only with long times. Since an object is most adequately apprehended in the state of attention, we come nearest to an accurate appreciation of time when we attend to it: attention does not lengthen time, but inattention shortens it. This accounts for the error of time-sequence: the second time is apprehended more attentively and adequately than the first, and the first therefore seems shorter. In the case of short times we have further to take account of the time of persistence (*Gegenwartszeit*) of the signal. If the more persistent sound is initial, the time is shortened; if it is final, the time is lengthened. These effects are not equal, since the former is partly compensated by increased attention to the interval.] **R. Lagerborg**. 'Zur Abgrenzung des Gefuhlsbegriffs.' [Feeling should be reserved for the unlocalised contents of undifferentiated consciousness, so that we may speak of algedonic feelings or of algedonic sensations according to circumstances. Stumpf's sharp distinction between the sense-feelings and the feeling-character of emotions cannot be maintained.] **O. Weiss**. 'Die Registrierung der menschlichen Herztöne durch Seifenhäutchen.' [Description of method and illustration of results.] **P. Linke**. 'Bemerkungen zur Dürrschen Kritik meines Würzburger Vortrags ("Neue stroboskopische Versuche").' **G. E. Mueller**. 'Gesellschaft für experimentelle Psychologie.' Literaturbericht. [Segal on Schmarsow's *Grundbegriffe d. Kunstwissenschaft.*] Referate. Bd. x., Heft 1 und 2. **A. Lehmann** und **R. H. Pedersen**. 'Das Wetter und unsere Arbeit. Experimentelle Untersuchungen über den Einfluss der meteorologischen Faktoren auf die körperliche und seelische Arbeitsfähigkeit.' [A study of the influence of weather on mental and bodily work. The paper opens with a description of the method of recording the meteorological observations and of determining the coefficients of correlation. Bodily work was tested by means of the Lehmann ergograph (school children) and the Regnier dynamometer (three adults). It proved to be dependent, in various ways, upon illumination, temperature and atmospheric pressure: the dependence is

explained by reference to the temperature requirements of the organism and the amount of hæmoglobin in the blood. On the mental side, the writers show first that 'disposition,' inclination for work, varies with the height of the barometer. They then distinguish two types of mental work: that which demands energy of attention (*e.g.*, retention) and that which appeals to acquired delicacy of psychophysical organisation (*e.g.*, discrimination). The former, represented by memory experiments, is subject to the same meteorological influences as bodily work; the latter, measured as the rapidity of addition, is wholly independent of illumination and atmospheric pressure, while its relation to temperature is markedly different from that of memory. The results have theoretical importance, as explaining certain fluctuations in mental measurements, and are also of practical educational interest.] **E. Tassy.** 'Ideativer Erethismus.' [The basal law of the intellect is the law of analogy, which finds its explanation in the principle of specific connexion (*Verkettung*) along the line of least resistance. The three theoretically distinguishable modes of erethism of the neurones which mediate ideas—coincidence, reformation and exaltation—all conform to this law of analogy, and to the implied law of contrast. The æsthetic effect of beauty, which is conditioned upon an indeterminate extension of impersonal knowledge, may be explained in terms of the three erethisms, and indeed bears direct testimony to their existence.] **Emil Freiherr von Gebsattel.** 'Bemerkungen zur Psychologie der Gefühlsirradiation.' [The author defines feelings as 'Erlebnisse der Stellungnahme und des inneren sich Befindens in Angesicht irgendwelcher Gegenstände,' and thus rules out the class of logical feelings. He finds that feelings are connected only with the object of attention, so that they share in the *Richtungsbestimmtheit* of the self; objects thus possess an 'affective tone'. This, which is fluctuating, must be distinguished from 'affective significance,' which is an objective determination of the objects themselves. While, now, feeling is referred to the apperceived contents, it need not have its ground in them. Feeling irradiates; the affective tone may expand, to cover the whole either of a uniformly apperceived or of an apperceptively articulated manifold. There may even be an apparent shift or transference of affective tone: this is in reality due to the fact of co-apperception, to the presence of 'nicht eigentlich intendierte gedankliche Elemente' along with the elements 'auf die ich innerlich abziele'. The various forms of co-apperception are outlined, and the shift of feeling illustrated and discussed under the different headings. Methods of analysis are suggested, by means of which affective illusions of the irradiatory type may be discovered.] **F. Biske.** 'Zum Verständnis des psychophysischen Gesetzes.' [On the analogy of the physical law of the diffusion of energy in a medium, we may read the psychophysical law as follows: the perception of sensible changes $dS$ corresponds to the increase of the sphere of diffusion of energy by equal distances $dr$.] Literaturbericht. **A. Vierkandt.** 'Literaturbericht zur Kultur- und Gesellschaftslehre für das Jahr 1906.' Einzelbesprechungen. Referate.

Kant-Studien. Band xiii., Heft 1 und 2. **Adolf Trendelenburg.** 'Zur Geschichte des Wortes Person.' [A paper written in 1870 by the late Adolf Trendelenburg, and here published for the first time. The history and development of the term 'person' is traced from the Greeks to Kant.] **Otto Baensch.** 'Über Historische Kausalität.' [A slight and not very illuminating analysis.] **Bruno Bauch.** 'Kant in neuer Ultramontan- und Liberal- Katholischer Beleuchtung.' [A criticism of an article, 'Kant, der Philosophe des Protestantismus,' in the Roman Catholic *Jahrbuch für Philosophie*.] **Eduard Sprenger.** 'W. v.

Humboldt und Kant.' [A most excellent account of the profound influence which Kant exercised upon Humboldt and of Humboldt's own personal development of the Critical principles.] Recensionen, etc.

Archiv für Systematische Philosophie. Neue Folge. Band xiv. Heft 1, 27 Februar, 1908. **Ludwig Stein.** 'Der Pragmatismus. Ein neuer Name für alte Denkmethoden.' [A preliminary article giving an account of the widespread nature of the movement, and paying a high tribute to the ability of Prof. James and to the skill and good humour with which the controversy is conducted. In mentioning reviews of Prof. James's *Pragmatism* Mind is only credited with Mr. McTaggart's notice, Mr. Schiller's being overlooked.] **Max Frischeisen-Köhler.** 'Naturwissenschaft und Wirklichkeitserkenntnis.' [Energetic method not justified in refusing to go behind visible order and division of energies. Scientific analysis only an extension of pre-scientific knowledge, and ought to yield, just as much, knowledge of reality.] **Martin Meyer.** 'Religion und Lebensgenuss. Ein Versuch religiöser Weltauffassung.' [Religion and pleasure coincide, since the first is the cause of progress on which pleasure attends.] **Friedrich Sommer.** 'Grundzüge einer Sozialaristokratie.' [How, without regard to birth or place, to create conditions which should ensure the highest possible development of psychical and physical qualities.] **Theodor Lessing.** 'Studien zur Wertaxiomatik.' [A long and detailed article giving a scheme for the proper consideration of values under: i. Pure formal doctrine of value; ii. Phenomenology of value; iii. Psychology of value, and iv. Actual doctrine of value; and offering an attempt towards a scientific analysis of the concept.] **Paul Schwartzkopf.** 'Die Räumlichkeit als objektiver Empfindungsverband.' [Spatiality in second and third dimensions thought into the sensations of sight: it is "anschauliche Gegenständlichkeit".] Jahresbericht über die Literatur zur Metaphysik. **David Koigen.** [Fortsetzung] Philosophie und Metaphysik. Naturphilosophie und Metaphysik. Die neuesten Erscheinungen, etc.

Vierteljahrsschrift für Wissenschaftliche Philosophie und Soziologie. Jahrgang xxxi., Heft iv., December, 1907. **Georg Wernick.** 'Der Wirklichkeitsgedanke'—6 Artikle. [Schluss.] **Otto Meyerhof.** 'Der Streit um die psychologische Vernunftkritik. Die Fries'sche Schule und ihre Gegner.' [Criticism of Ernst Cassirer. His misconceptions vitiate his views regarding the school of Fries.] **Ernst Cassirer.** 'Zur Frage nach der Methode der Erkenntniskritik. Eine Entgegnung.' [Replies to the preceding article, discussing the "inner experience" of Nelson and Fries; the relation of Fries and Kant, etc. Enforces his contention that Nelson has really lapsed upon the doctrine of "Common Sense".] **Paul Barth.** 'Die Soziologie Albert Schäffles.' [Society not a system of bodies, but of conative unities, thus a conational, or better a spiritual organism. Schaffle has not clearly perceived the distinction between society and an animal organism. The fundamental error of his sociology the place it gives to material goods. Sociology, to be manageable, must restrict itself to the human will.] Besprechungen. Bibliographie, etc.

Philosophisches Jahrbuch. Band xix., Heft 3. **F. Klunke.** 'Der Instinkt.' [The first article of a series. Three characteristics of instinct are: the perfection and certitude of its working; its uniformity and immutability; and the fact that its activity is shared by the whole

species. We must lay down three rules in this investigation: first, to judge (as we must) of brute psychical life by the phenomena of our own conscious states; second, to adopt the simplest possible explanation; third, to decide only after complete observation of the phenomena. There are five theories as to instinct: (*a*) the reflex or mechanical theory; (*b*) the hallucination or somnambulism theory; (*c*) the theory of intelligence in brutes; (*d*) the theory of innate representations (Vorstellungen); (*e*) the theory of an 'estimative faculty,' as given by Aquinas.] **J. Becker.** 'Der Satz des hl. Anselm: Credo ut intellegam.' [The writer concludes that this motto, properly understood, is not the absolute subordination of reason to faith, but merely the basis of all intelligent theological speculation. It has always been understood thus by the best Catholic thinkers. For Anselm and the Scholastics reason and faith were not hostile brothers; faith is the highest form of intelligence, and a participation of God's infinite intelligence.] **J. Pohle.** 'Zweckmässigkeit und Unzweckmässigkeit.' [This is rather a series of aphorisms than an article, and very difficult to analyse. The writer points out many things which men of science formerly considered as existing to no purpose the utility of which has now been discovered. But at all events there are things in nature which have a purpose; and therefore, if there is design, there is a designer—God.] **P. Minges.** 'Sittlichkeit eines Aktes nach Duns Scotus.' [This paper is theological, dealing with the question whether Scot admitted that murder and adultery would be moral actions, if God willed them to be so. It is shown that Scot's meaning has been misunderstood; that he only meant to deny that the merely moral virtues were sufficient, without the intention of pleasing God, not to say that an act becomes good simply because God commands it.]

Rivista Filosofica. Anno ix., vol. x., Fasc. iv., August-September-October, 1907. **B. Varisco.** 'Che cosa consti.' [An adverse criticism on the positivist side of an argument in Ormond's *Concepts of Philosophy*, to the effect that consciousness is not only real itself but also supplies the standard of reality. The critic argues that a reality independent of ourselves need not necessarily be conscious.] **S. Tedeschi.** 'Valore e abitudine.' [The representation of types in imitative art produces more æsthetic enjoyment than the representation of anomalies because their apperception is attended with less difficulty.] **G. Salvadori.** 'Fede e Ragione.' ['Reason itself leads us to faith; and while it can and must exclude those religious beliefs which by their origin and content are in evident contradiction with the laws established by positive science and the critical methods followed by it, and which therefore offer no guarantee for their correspondence with objective realities—at the same time the fact that the field of those realities is inexhaustible inevitably leads us to affirm that faith is justified, or rather necessary, in so far as it does not contradict those laws, and in so far as it satisfies the deepest requirements and the highest aspirations of the human mind.'] **L. Miranda.** 'La posizione logica del rapporto giuridico.' [A plea for the revival of Hegel's Philosophy of Law as against the modern reliance on penal sanctions.] 'L'Anticlericalismo.' [An unsigned article, ably analysing the different forms taken by the anti-clerical movement in Italy. The Modernist position is regarded as untenable, and the inquiry seems to result in the recommendation of a liberal Christianity divorced from Rome.] Rassegna Bibliografica, etc. Anno ix., vol. x., Fasc. v., November-December, 1907. **E. Juvalta.** 'Il metodo dell' Economia Pura nell' Etica.' [As political economy assumes an 'economic man,' so in default of an absolute end on which all can

agree the best method of ethics is to provide for the establishment of a social state in which every one can equally pursue the end that to him seems best. And in order that all may pursue their own ends a general rule of justice must be rocognised.] **G. Rossi.** 'Vico ne' tempi di Vico.' [Brings to light some curious metaphysical speculations of Vico, of which one is that motion cannot be transferred from body to body.] **E. Morrelli.** 'Vita morale e vita sociale.' [After analysing the sociocratic theories of some modern Positivists the writer endeavours to correct and supplement them by examples of moral progress due to individual revolt and initiative. To be continued.] **E. di Carlo.** 'La Filosofia del Dirito ridotta alla Filosofia dell' Economia.' [An adverse criticism of Benedetto Croce's reduction of jurisprudence to a branch of political economy.] **A. Faggi.** 'Un Poeta Filosofo (Sully Prudhomme).' [Chiefly a discussion of the possibilities of physical science as a subject for poetry.] Rassegna Bibliografica, etc. Anno x., vol. xi., Fasc. i., January-February, 1908. **N. Fornelli.** 'Il nuovo individualismo religioso.' [A study of the causes by which many persons are enabled at the present day to combine a knowledge of modern science with acquiescence in or active support of outworn religious beliefs. To be continued.] **A. Faggi.** 'La coscienza negli animali.' [An able and interesting article on Loeb's theory of nervous action, particularly disputing the Californian professor's position that 'consciousness' is a purely metaphysical expression.] **A. Levi.** 'La psicologia della esperienza indifferenziata di James Ward.' [A summary, in parts not so clear as could be wished, of Dr. Ward's celebrated article on Psychology in the *Encyclopædia Britannica*.] **L. Suali.** 'Un trattato elementare di filosofia indiana.' [The first part of a translation (the first ever made), with an introduction and short explanatory notes, of the Tarkâmrita of Jagadîça, a treatise which, according to Dr. Suali, deserves to be better known than it is.] **E. Morselli.** 'Vita morale e vita sociale (contin. e fine).' [Calls for a theory of values in opposition to the doctrines of evolutionary or historical fatalism. It may be observed that this writer is mistaken in thinking that Spencer considered individuality a thing to be desired and promoted *because* evolution was tending towards its increase (p. 125). But as he attributes Comte's law of religious progress to Spencer (p. 117) his acquaintance with either philosopher must be slight.] **R. Mondolfo.** 'La dottrina della proprietà nel Montesquieu.' [Montesquieu holds that as virtue, in the sense of equality, is the constitutive principle of democratic republics, their government should prevent the accumulation of wealth in the hands of individuals by enacting sumptuary laws, and by interfering with the liberty of bequest and donation. Locke even considered that the State ought to see that none of its citizens was without the means of earning a comfortable subsistence. Both thinkers must therefore be regarded as precursors of modern socialism.] Riviste Straniere, etc. Fasc. ii., March-April, 1908. **B. Varisco.** 'La Creazione.' [A long, close and subtle criticism of Bergson's *l'Évolution créatrice*, chiefly occupied in defending the trustworthiness of our intelligence, so far as it goes. 'The mechanical agnostic philosophy which has held its ground until lately is worthless.' And Bergson was justified in attempting to put another view in its place. But he has made the mistake of discrediting intelligence, of which that philosophy is not a necessary result.] **N. Fornelli.** 'Il nuovo individualismo religioso (contin. e fine).' [Science guarantees the future of religion as an indestructible consciousness of the infinite, while the modern spirit insists on unlimited liberty of choosing the form under which that consciousness is to be realised.] **A. Levi.** 'La psicologia della esperienza indifferenziata di James Ward.' [Con-

tinues the exposition begun in the preceding number.] **A. Tilgher.** 'Bramanesimo, Buddismo e Cristianesimo.' [Brahmanism affirms Atman as the hidden reality and essential identity of things. Buddhism begins by denying Atman, thus reducing the world to a phenomenal flux, and ends with Nirvana, which is the negation of the flux. To be continued.] **P. F. Nicoli.** 'Psicologia e Linguistica.' Rassegna Bibliografica, etc.

# IX.—NOTES.

## 'IF' AND 'IMPLY'.

With the Editor's kind permission I should like to say a few words in answer to Mr. Russell's and Prof. Mackenzie's critical notes in the April number of Mind.

If we look into the matter closely, it will, I think, be found that in mathematical reasoning the simple disjunctive $A' + B$ is always understood to really mean $(A' + B)^\epsilon$, which asserts that "it is *certain* (true in all cases) that either A is false or B true". This being understood, I admit that in *mathematics* (the theory of probability excepted) the disjunctive may be considered equivalent to the conditional or implication, so that the validity of Mr. Russell's valuable work on the *Principles of Mathematics* is in no way affected by our discussion. But in the wider field of general logic the assumption of equivalence is unsafe. Suppose, for example, we find it predicted in some astrological almanac that "This year a great *war* will take place in Europe," and also that "This year a disastrous *earthquake* will take place in Europe". Each of these assertions is a *proposition* both in Mr. Russell's sense of the word and in mine; and as neither of them can be called *certain* or *impossible* I regard them both as *variable*. Let W denote the first proposition and E the second. It is surely an awkward assumption (or convention) that leads here to the conclusion that "either W implies E or else E implies W". *War* in Europe does not necessarily imply a disastrous *earthquake* the same year in Europe; nor does a disastrous *earthquake* in Europe necessarily imply a great *war* the same year in Europe.

Mr. Russell, if I understand him aright, does not consider a propositional form of words, such as "He is a doctor," a real proposition till it is actually employed to give information. I should call it a proposition whether so employed or not. I see no reason why an instrument should not have the same name when lying idle as when employed for a purpose. But this mere question of name does not, so far as I can see, affect the real question at issue. The real cause of the misunderstanding is the fact that with Mr. Russell the proposition "A implies B" means $(AB')^\epsilon$, whereas with me it means $(AB')^\eta$. The symbol $(AB')^\epsilon$ asserts that $AB'$ is *false;* the symbol $(AB')^\eta$ asserts that $AB'$ is *impossible.* Our hypothetical predictions of the astrological almanac may, and probably will, turn out *false;* but as they contradict no certain or admitted *data*—no law of nature or of linguistic consistency—they can hardly be called *impossible.*

Prof. Mackenzie's reasoning may be symbolically illustrated as follows: Putting D for "He is a *doctor*," and R for "His hair is *red*," his four "essential steps" are:—

(1) $(D + D')(R + R')$, which $= \epsilon\epsilon = \epsilon$,

(2) $(D + D') + (R + R')$, which $= \epsilon + \epsilon = \epsilon$,

(3) $(D + R') + (D' + R)$, which $= (D + D') + (R' + R) = \epsilon + \epsilon = \epsilon$,

(4) $(R : D) + (D : R)$, which $= (RD')^\eta + (DR')^\eta = \theta^\eta + \theta^\eta = \eta + \eta = \eta$.

We might also write (4) thus :

$(R : D) + (D : R)$, which $= (R' + D)^{\epsilon} + (D' + R)^{\epsilon} = \theta^{\epsilon} + \theta^{\epsilon} = \eta + \eta = \eta$.

The first three steps being certainties, each of them implies the other two, but none of them implies the fourth, as the fourth is an impossibility. Prof. Mackenzie says that "it may be doubted whether the transition from (2) to (3) is legitimate". But his doubt arises, I believe, from his thinking of (3) as meaning

$$(D + R')^{\epsilon} + (D' + R)^{\epsilon},$$

which, as already shown, is an impossibility. Thus regarded, (2) would *not* imply (3), as a certainty cannot imply an impossibility. The statement D + R', since (like its denial RD') it may be true or false, is a variable ($\theta$), and therefore cannot be a certainty ($\epsilon$). Hence, $(D + R')^{\epsilon}$ is a self-contradiction ($\eta$). Similarly, $(D' + R)^{\epsilon}$ is a self-contradiction.

Prof. Mackenzie says that our discussion on these points "leads us to see that the implications of a double disjunctive have not yet been sufficiently brought out by logicians". To this I would add that it is scarcely possible to treat the subject adequately without the aid of symbolic logic, and that no system of symbolic logic can do this effectively unless it takes symbolic account of the distinctions between certainties ($\epsilon$), impossibilities ($\eta$), and variables ($\theta$). Consider the standard syllogism *Barbara*. Let A denote its premisses and B its conclusion. It is usual to consider the syllogism as expressible by A $\therefore$ B ("A *therefore* B"). In this *therefore*-form the syllogism is not necessarily valid, for thus stated, *it asserts the truth of* A, *and is therefore false when* A *is false*. The proper symbolic form is A : B ("*If* A *then* B"). In this form it is always true whether A be true or false, for in this implicational form it only asserts $(AB')^{\eta}$, that "it is never the case that the premisses are true and the conclusion false". Observe again that A : B is equivalent to B' : A', but that A $\therefore$ B is *not* equivalent to B' $\therefore$ A'. For A $\therefore$ B *affirms* both A and B, while B' $\therefore$ A' *denies* both A and B. In the *therefore*-form (A $\therefore$ B) the syllogism is open to the attacks made upon it by Mill, Bradley and others. In the "*If*" or *implicational* form (A : B) its validity is unassailable.

I am not one of those who would make a clean sweep of the traditional logic and all connected with it. On the contrary, I consider its subject matter, and especially its syllogistic problems, as exceedingly valuable in a first course of symbolic logic. But, as I have amply shown in my '*Symbolic Logic and its Applications*,' the whole subject of formal logic needs recasting.

As a simple syllogistic problem solved symbolically, take the following :—

Given the premiss that all the boys in a certain school who learn *Latin* also learn *French*, what is the weakest premiss that must be joined to this so that the combination may imply that some who learn *French* do not learn *Greek*?

Speaking of a boy taken at random, let L, F, G respectively affirm that "he learns *Latin*," that "he learns *French*," that "he learns *Greek*". Let W denote the weakest premiss required. The syllogism will then be

$$(L : F)\ W\ :\ (F : G)'.$$

Transposing and changing signs, so as to get rid of the non-implicational $(F : G)'$, we get

$$(L : F)\ (F : G) : W'.$$

But (by *Barbara*, in its proper implicational form) we have

$$(L : F)\ (F : G) : (L : G).$$

Equating consequents, we get $W' = (L : G)$ and $W = (L : G)'$. The required permiss is therefore $(L : G)'$, which asserts that L does not

imply G, or (in other words) that "Some who learn *Latin* do not learn *Greek*". Supplying this missing premiss, we get a syllogism of the form *Bokardo*.

Observe that this method of transposition, by which all valid syllogisms can be reduced to the form (A : B) (B : C) : (A : C), would be logically inadmissible if (following the usual erroneous custom) we employ the sign .·. ("therefore") instead of the proper sign : ("implies") between the premisses and the conclusion. For though the conditional AW : C′ is equivalent to the conditional AC : W′, as each means $(AWC)_n$, the categorical AW .·. C′ (which affirms W and denies C) cannot be equivalent to the categorical AC .·. W′ (which affirms C and denies W).

HUGH MACCOLL.

## THE MEANING OF THE WORD 'TRUTH'.[1]

My account of truth is realistic, and follows the epistemological dualism of common sense. Suppose I say to you, "The thing exists"—is that true or not? How can you tell? Not till my statement has developed its meaning farther is it determined as being true, false, or irrelevant to reality altogether. But if now you ask "what thing?" and I reply "a desk"; if you ask "where?" and I point to a place; if you ask "does it exist materially, or only in imagination?" and I say "materially"; if moreover I say "I mean that desk," and then grasp and shake a desk which you see just as I have described it, you are willing to call my statement true. But you and I are commutable here; we can exchange places and, as you go bail for my desk, so I can go bail for yours.

This notion of a reality independent of either of us, taken from ordinary social experience, lies at the base of the pragmatist definition of truth. With some such reality any statement, in order to be counted true, must agree. Pragmatism defines 'agreeing' to mean certain ways of 'working,' be they actual or potential. Thus, for my statement 'the thing exists' to be true of a determinate reality, it must be able to lead me to shake your desk, to explain myself by words that suggest that desk to your mind, to make a drawing that is like the desk you see, etc. Only in such ways as this is there sense in saying it agrees with *that* reality, only thus does it gain for me the satisfaction of hearing you corroborate me. Reference then to something determinate, and some sort of adaptation to it worthy of the name of agreement, are thus constituent elements in the definition of any statement as 'true'.

You cannot get at either the reference or the adaptation without using the notion of the workings. *That* the thing is, *what* it is, and *which* it is (of all the possible things with that what) are points determinable only by the pragmatic method. The 'which' means a possibility of pointing, or of otherwise singling out the special object; the 'what' means choice on our part of an essential aspect to conceive it by (and this is always relative to what Dewey calls our own 'situation'); and the 'that' means our assumption of the attitude of belief, the reality-recognising attitude. Surely for understanding what the word true means as applied to a statement, the mention of such workings is indispensable. Surely if we leave them out the subject and the object of the cognitive relation float—in the same universe, 'tis true—but vaguely and ignorantly and without mutual contact or mediation.

[1] Remarks at the meeting of the American Philosophical Association, Cornell University, December, 1907.

Our critics nevertheless call the workings inessential. No functional possibilities 'make' our beliefs true, they say; they are true inherently, true positively, born "true" as the Count of Chambord was born, "Henri-Cinq." Pragmatism insists, on the contrary, that statements and beliefs are thus inertly and statically true only by courtesy: they practically pass for true; but you *cannot define what you mean* by calling them true without referring to their functional possibilities. These give its whole *logical content* to that relation to reality on a belief's part to which the name 'truth' is applied, a relation which otherwise remains one of mere coexistence or bare witness.

The foregoing statements reproduce the essential content of the lecture on Truth in my book *Pragmatism*. Schiller's doctrine of 'humanism,' Dewey's *Studies in Logical Theory* and my own 'radical empiricism,' all involve this general notion of truth as 'working,' either actual or conceivable. But they envelop it as only one detail in the midst of much wider theories that aim eventually at determining the notion of what 'Reality' at large is in its ultimate nature and constitution.

WILLIAM JAMES.

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## MIND ASSOCIATION.

The following gentlemen have joined the MIND Association since the printing of the January number:—

BOWMAN (A. A.), 26 Sutherland Street, Hillhead, Glasgow.
MACKINTOSH (Rev. Prof. H. R.), 81 Colinton Road, Edinburgh.
SUBRAHMANYAM (Prof. A.), Rajahmundry College, Madras, India.

MIND

A QUARTERLY REVIEW

OF

PSYCHOLOGY AND PHILOSOPHY

## I.—THE UNREALITY OF TIME.

By J. Ellis McTaggart.

It doubtless seems highly paradoxical to assert that Time is unreal, and that all statements which involve its reality are erroneous. Such an assertion involves a far greater departure from the natural position of mankind than is involved in the assertion of the unreality of Space or of the unreality of Matter. So decisive a breach with that natural position is not to be lightly accepted. And yet in all ages the belief in the unreality of time has proved singularly attractive.

In the philosophy and religion of the East we find that this doctrine is of cardinal importance. And in the West, where philosophy and religion are less closely connected, we find that the same doctrine continually recurs, both among philosophers and among theologians. Theology never holds itself apart from mysticism for any long period, and almost all mysticism denies the reality of time. In philosophy, again, time is treated as unreal by Spinoza, by Kant, by Hegel, and by Schopenhauer. In the philosophy of the present day the two most important movements (excluding those which are as yet merely critical) are those which look to Hegel and to Mr. Bradley. And both of these schools deny the reality of time. Such a concurrence of opinion cannot be denied to be highly significant—and is not the less significant because the doctrine takes such different forms, and is supported by such different arguments.

I believe that time is unreal. But I do so for reasons which are not, I think, employed by any of the philosophers whom I have mentioned, and I propose to explain my reasons in this paper.

Positions in time, as time appears to us *primâ facie*, are distinguished in two ways. Each position is Earlier than some, and Later than some, of the other positions. And each position is either Past, Present, or Future. The distinctions of the former class are permanent, while those of the latter are not. If M is ever earlier than N, it is always earlier. But an event, which is now present, was future and will be past.

Since distinctions of the first class are permanent, they might be held to be more objective, and to be more essential to the nature of time. I believe, however, that this would be a mistake, and that the distinction of past, present and future is as *essential* to time as the distinction of earlier and later, while in a certain sense, as we shall see, it may be regarded as more *fundamental* than the distinction of earlier and later. And it is because the distinctions of past, present and future seem to me to be essential for time, that I regard time as unreal.

For the sake of brevity I shall speak of the series of positions running from the far past through the near past to the present, and then from the present to the near future and the far future, as the A series. The series of positions which runs from earlier to later I shall call the B series. The contents of a position in time are called events. The contents of a single position are admitted to be properly called a plurality of events. (I believe, however, that they can *as* truly, though not *more* truly, be called a single event. This view is not universally accepted, and it is not necessary for my argument.) A position in time is called a moment.

The first question which we must consider is whether it is essential to the reality of time that its events should form an A series as well as a B series. And it is clear, to begin with, that we never *observe* time except as forming both these series. We perceive events in time as being present, and those are the only events which we perceive directly. And all other events in time which, by memory or inference, we believe to be real, are regarded as past or future—those earlier than the present being past, and those later than the present being future. Thus the events of time, as observed by us, form an A series as well as a B series.

It is possible, however, that this is merely subjective. It may be the case that the distinction introduced among positions in time by the A series—the distinction of past, present and future—is simply a constant illusion of our minds, and that the real nature of time only contains the distinction of the B series—the distinction of earlier and

later. In that case we could not *perceive* time as it really is, but we might be able to *think* of it as it really is.

This is not a very common view, but it has found able supporters. I believe it to be untenable, because, as I said above, it seems to me that the A series is essential to the nature of time, and that any difficulty in the way of regarding the A series as real is equally a difficulty in the way of regarding time as real.

It would, I suppose, be universally admitted that time involves change. A particular thing, indeed, may exist unchanged through any amount of time. But when we ask what we mean by saying that there were different moments of time, or a certain duration of time, through which the thing was the same, we find that we mean that it remained the same while other things were changing. A universe in which nothing whatever changed (including the thoughts of the conscious beings in it) would be a timeless universe.

If, then, a B series without an A series can constitute time, change must be possible without an A series. Let us suppose that the distinction of past, present and future does not apply to reality. Can change apply to reality? What is it that changes?

Could we say that, in a time which formed a B series but not an A series, the change consisted in the fact that an event ceased to be an event, while another event began to be an event? If this were the case, we should certainly have got a change.

But this is impossible. An event can never cease to be an event. It can never get out of any time series in which it once is. If N is ever earlier than O and later than M, it will always be, and has always been, earlier than O and later than M, since the relations of earlier and later are permanent. And as, by our present hypothesis, time is constituted by a B series alone, N will always have a position in a time series, and has always had one.[1] That is, it will always be, and has always been, an event, and cannot begin or cease to be an event.

Or shall we say that one event M merges itself into another event N, while preserving a certain identity by means of an unchanged element, so that we can say, not merely that M has ceased and N begun, but that it is M which has

[1] It is equally true, though it does not concern us on the hypothesis which we are now considering, that whatever is once in an A series is always in one. If one of the determinations past, present, and future can ever be applied to N, then one of them always has been and always will be applicable, though of course not always the same one.

become N? Still the same difficulty recurs. M and N may have a common element, but they are not the same event, or there would be no change. If therefore M changes into N at a certain moment, then, at that moment, M has ceased to be M, and N has begun to be N. But we have seen that no event can cease to be, or begin to be, itself, since it never ceases to have a place as itself in the B series. Thus one event cannot change into another.

Neither can the change be looked for in the numerically different moments of absolute time, supposing such moments to exist. For the same arguments will apply here. Each such moment would have its own place in the B series, since each would be earlier or later than each of the others. And as the B series indicate permanent relations, no moment could ever cease to be, nor could it become another moment.

Since, therefore, what occurs in time never begins or ceases to be, or to be itself, and since, again, if there is to be change it must be change of what occurs in time (for the timeless never changes), I submit that only one alternative remains. Changes must happen to the events of such a nature that the occurrence of these changes does not hinder the events from being events, and the same events, both before and after the change.

Now what characteristics of an event are there which can change and yet leave the event the same event? (I use the word characteristic as a general term to include both the qualities which the event possesses, and the relations of which it is a term—or rather the fact that the event is a term of these relations.) It seems to me that there is only one class of such characteristics—namely, the determination of the event in question by the terms of the A series.

Take any event—the death of Queen Anne, for example—and consider what change can take place in its characteristics. That it is a death, that it is the death of Anne Stuart, that it has such causes, that it has such effects—every characteristic of this sort never changes. "Before the stars saw one another plain" the event in question was a death of an English Queen. At the last moment of time—if time has a last moment—the event in question will still be a death of an English Queen. And in every respect but one it is equally devoid of change. But in one respect it does change. It began by being a future event. It became every moment an event in the nearer future. At last it was present. Then it became past, and will always remain so, though every moment it becomes further and further past.

Thus we seem forced to the conclusion that all change is

only a change of the characteristics imparted to events by their presence in the A series, whether those characteristics are qualities or relations.

If these characteristics are qualities, then the events, we must admit, would not be always the same, since an event whose qualities alter is, of course, not completely the same. And, even if the characteristics are relations, the events would not be completely the same, if—as I believe to be the case—the relation of X to Y involves the existence in X of a quality of relationship to Y.[1] Then there would be two alternatives before us. We might admit that events did really change their nature, in respect of these characteristics, though not in respect of any others. I see no difficulty in admitting this. It would place the determinations of the A series in a very unique position among the characteristics of the event, but on any theory they would be very unique characteristics. It is usual, for example, to say that a past event never changes, but I do not see why we should not say, instead of this, "a past event changes only in one respect—that every moment it is further from the present than it was before". But although I see no intrinsic difficulty in this view, it is not the alternative I regard as ultimately true. For if, as I believe, time is unreal, the admission that an event in time would change in respect of its position in the A series would not involve that anything really did change.

Without the A series then, there would be no change, and consequently the B series by itself is not sufficient for time, since time involves change.

The B series, however, cannot exist except as temporal, since earlier and later, which are the distinctions of which it consists, are clearly time-determinations. So it follows that there can be no B series where there is no A series, since where there is no A series there is no time.

But it does not follow that, if we subtract the determinations of the A series from time, we shall have no series left at all. There is a series—a series of the permanent relations to one another of those realities which in time are events—and it is the combination of this series with the A determinations which gives time. But this other series—let us

[1] I am not asserting, as Lotze did, that a relation between X and Y *consists* of a quality in X and a quality in Y—a view which I regard as quite indefensible. I assert that a relation Z between X and Y *involves* the existence in X of the quality "having the relation Z to Y" so that a difference of relations always involves a difference in quality, and a change of relations always involves a change of quality.

call it the C series—is not temporal, for it involves no change, but only an order. Events have an order. They are, let us say, in the order M, N, O, P. And they are therefore *not* in the order M, O, N, P, or O, N, M, P, or in any other possible order. But that they have this order no more implies that there is any change than the order of the letters of the alphabet, or of the Peers on the Parliament Roll, implies any change. And thus those realities which appear to us as events might form such a series without being entitled to the name of events, since that name is only given to realities which are in a time series. It is only when change and time come in that the relations of this C series become relations of earlier and later, and so it becomes a B series.

More is wanted, however, for the genesis of a B series and of time than simply the C series and the fact of change. For the change must be in a particular direction. And the C series, while it determines the order, does not determine the direction. If the C series runs M, N, O, P, then the B series from earlier to later cannot run M, O, N, P, or M, P, O, N, or in any way but two. But it can run either M, N, O, P (so that M is earliest and P latest) or else P, O, N, M (so that P is earliest and M latest). And there is nothing either in the C series or in the fact of change to determine which it will be.

A series which is not temporal has no direction of its own, though it has an order. If we keep to the series of the natural numbers, we cannot put 17 between 21 and 26. But we keep to the series, whether we go from 17, through 21, to 26, or whether we go from 26, through 21, to 17. The first direction seems the more natural to us, because this series has only one end, and it is generally more convenient to have that end as a beginning than as a termination. But we equally keep to the series in counting backward.

Again, in the series of categories in Hegel's dialectic, the series prevents us from putting the Absolute Idea between Being and Causality. But it permits us either to go from Being, through Causality, to the Absolute Idea, or from the Absolute Idea, through Causality, to Being. The first is, according to Hegel, the direction of proof, and is thus generally the most convenient order of enumeration. But if we found it convenient to enumerate in the reverse direction, we should still be observing the series.

A non-temporal series, then, has no direction in itself, though a person considering it may *take* the terms in one

direction or in the other, according to his own convenience. And in the same way a person who contemplates a time-order may contemplate it in either direction. I may trace the order of events from the Great Charter to the Reform Bill, or from the Reform Bill to the Great Charter. But in dealing with the time series we have not to do merely with a change in an external contemplation of it, but with a change which belongs to the series itself. And this change has a direction of its own. The Great Charter came before the Reform Bill, and the Reform Bill did not come before the Great Charter.

Therefore, besides the C series and the fact of change there must be given—in order to get time—the fact that the change is in one direction and not in the other. We can now see that the A series, together with the C series, is sufficient to give us time. For in order to get change, and change in a given direction, it is sufficient that one position in the C series should be Present, to the exclusion of all others, and that this characteristic of presentness should pass along the series in such a way that all positions on the one side of the Present have been present, and all positions on the other side of it will be present. That which has been present is Past, that which will be present is Future.[1] Thus to our previous conclusion that there can be no time unless the A series is true of reality, we can add the further conclusion that no other elements are required to constitute a time-series except an A series and a C series.

We may sum up the relations of the three series to time as follows: The A and B series are equally essential to time, which must be distinguished as past, present and future, and must likewise be distinguished as earlier and later. But the two series are not equally fundamental. The distinctions of the A series are ultimate. We cannot explain what is meant by past, present and future. We can, to some extent, describe them, but they cannot be defined. We can only show their meaning by examples. "Your breakfast this morning," we can say to an inquirer, "is past; this conversation is present; your dinner this evening is future." We can do no more.

The B series, on the other hand, is not ultimate. For, given a C series of permanent relations of terms, which is

[1] This account of the nature of the A series is not valid, for it involves a vicious circle, since it uses "has been" and "will be" to explain Past and Future. But, as I shall endeavour to show later on, this vicious circle is inevitable when we deal with the A series, and forms the ground on which we must reject it.

not in itself temporal, and therefore is not a B series, and given the further fact that the terms of this C series also form an A series, and it results that the terms of the C series become a B series, those which are placed first, in the direction from past to future, being earlier than those whose places are further in the direction of the future.

The C series, however, is as ultimate as the A series. We cannot get it out of anything else. That the units of time do form a series, the relations of which are permanent, is as ultimate as the fact that each of them is present, past, or future. And this ultimate fact is essential to time. For it is admitted that it is essential to time that each moment of it shall either be earlier or later than any other moment; and these relations are permanent. And this—the B series—cannot be got out of the A series alone. It is only when the A series, which gives change and direction, is combined with the C series, which gives permanence, that the B series can arise.

Only part of the conclusion which I have now reached is required for the general purpose of this paper. I am endeavouring to base the unreality of time, not on the fact that the A series is more fundamental than the B series, but on the fact that it is as essential as the B series—that the distinctions of past, present and future are essential to time, and that, if the distinctions are never true of reality, then no reality is in time.

This view, whether it is true or false, has nothing surprising in it. It was pointed out above that time, as we perceive it, always presents these distinctions. And it has generally been held that this is a real characteristic of time, and not an illusion due to the way in which we perceive it. Most philosophers, whether they did or did not believe time to be true of reality, have regarded the distinctions of the A series as essential to time.

When the opposite view has been maintained, it has generally been, I believe, because it was held (rightly, as I shall try to show later on) that the distinctions of present, past and future cannot be true of reality, and that consequently, if the reality of time is to be saved, the distinction in question must be shown to be unessential to time. The presumption, it was held, was for the reality of time, and this would give us a reason for rejecting the A series as unessential to time. But of course this could only give a presumption. If the analysis of the notion of time showed that, by removing the A series, time was destroyed, this line of argument would be no longer open, and the unreality of the A series would involve the unreality of time.

I have endeavoured to show that the removal of the A series *does* destroy time. But there are two objections to this theory, which we must now consider.

The first deals with those time-series which are not really existent, but which are falsely believed to be existent, or which are imagined as existent. Take, for example, the adventures of Don Quixote. This series, it is said, is not an A series. I cannot at this moment judge it to be either past, present or future. Indeed I know that it is none of the three. Yet, it is said, it is certainly a B series. The adventure of the galley-slaves, for example, is later than the adventure of the windmills. And a B series involves time. The conclusion drawn is that an A series is not essential to time.

The answer to this objection I hold to be as follows. Time only belongs to the existent. If any reality is in time, that involves that the reality in question exists. This, I imagine, would be universally admitted. It may be questioned whether all of what exists is in time, or even whether anything really existent is in time, but it would not be denied that, if anything is in time, it must exist.

Now what is existent in the adventures of Don Quixote? Nothing. For the story is imaginary. The acts of Cervantes' mind when he invented the story, the acts of my mind when I think of the story—these exist. But then these form part of an A series. Cervantes' invention of the story is in the past. My thought of the story is in the past, the present, and—I trust—the future.

But the adventures of Don Quixote may be believed by a child to be historical. And in reading them I may by an effort of the imagination contemplate them as if they really happened. In this case, the adventures are believed to be existent or imagined as existent. But then they are believed to be in the A series, or imagined as in the A series. The child who believes them historical will believe that they happened in the past. If I imagine them as existent, I shall imagine them as happening in the past. In the same way, if any one believed the events recorded in Morris's *News from Nowhere* to exist, or imagined them as existent, he would believe them to exist in the future or imagine them as existent in the future. Whether we place the object of our belief or our imagination in the present, the past, or the future, will depend upon the characteristics of that object. But somewhere in our A series it will be placed.

Thus the answer to the objection is that, just as a thing is in time, it is in the A series. If it is really in time, it is really in the A series. If it is believed to be in time, it is believed

to be in the A series. If it is imagined as in time, it is imagined as in the A series.

The second objection is based on the possibility, discussed by Mr. Bradley, that there might be several independent time-series in reality. For Mr. Bradley, indeed, time is only appearance. There is no real time at all, and therefore there are not several real series of time. But the hypothesis here is that there should be within reality several real and independent time-series.

The objection, I imagine, is that the time-series would be all real, while the distinction of past, present, and future would only have meaning within each series, and could not, therefore, be taken as ultimately real. There would be, for example, many presents. Now, of course, many points of time can be present (each point in each time-series is a present once), but they must be present successively. And the presents of the different time-series would not be successive, since they are not in the same time. (Neither would they be simultaneous, since that equally involves being in the same time. They would have no time-relation whatever.) And different presents, unless they are successive, cannot be real. So the different time-series, which are real, must be able to exist independently of the distinction between past, present, and future.

I cannot, however, regard this objection as valid. No doubt, in such a case, no present would be *the* present—it would only be the present of a certain aspect of the universe. But then no time would be *the* time—it would only be the time of a certain aspect of the universe. It would, no doubt, be a real time-series, but I do not see that the present would be less real than the time.

I am not, of course, asserting that there is no contradiction in the existence of several distinct A series. My main thesis is that the existence of *any* A series involves a contradiction. What I assert here is merely that, supposing that there could be any A series, I see no extra difficulty involved in there being several such series independent of one another, and that therefore there is no incompatibility between the essentiality of an A series for time and the existence of several distinct times.

Moreover, we must remember that the theory of a plurality of time-series is a mere hypothesis. No reason has ever been given why we should believe in their existence. It has only been said that there is no reason why we should disbelieve in their existence, and that therefore they may exist. But if their existence should be incompatible with something else,

for which there is positive evidence, then there would be a reason why we should disbelieve in their existence. Now there is, as I have tried to show, positive evidence for believing that an A series is essential to time. Supposing therefore that it were the case (which, for the reasons given above, I deny) that the existence of a plurality of time-series was incompatible with the essentiality for time of the A series, it would be the hypothesis of a plurality of times which should be rejected, and not our conclusion as to the A series.

I now pass to the second part of my task. Having, as it seems to me, succeeded in proving that there can be no time without an A series, it remains to prove that an A series cannot exist, and that therefore time cannot exist. This would involve that time is not real at all, since it is admitted that, the only way in which time can be real is by existing.

The terms of the A series are characteristics of events. We say of events that they are either past, present, or future. If moments of time are taken as separate realities, we say of them also that they are past, present, or future. A characteristic may be either a relation or a quality. Whether we take the terms of the A series as relations of events (which seems the more reasonable view) or whether we take them as qualities of events, it seems to me that they involve a contradiction.

Let us first examine the supposition that they are relations. In that case only one term of each relation can be an event or a moment. The other term must be something outside the time-series.[1] For the relations of the A series are changing relations, and the relation of terms of the time-series to one another do not change. Two events are exactly in the same places in the time-series, relatively to one another, a million years before they take place, while each of them is taking place, and when they are a million years in the past. The same is true of the relation of moments to each other. Again, if the moments of time are to be distinguished as separate realities from the events which happen in them, the relation between an event and a moment is unvarying. Each event is in the same moment in the future, in the present, and in the past.

[1] It has been maintained that the present is whatever is simultaneous with the assertion of its presentness, the future whatever is later than the assertion of its futurity, and the past whatever is earlier than the assertion of its pastness. But this theory involves that time exists independently of the A series, and is incompatible with the results we have already reached.

The relations which form the A series then must be relations of events and moments to something not itself in the time-series. What this something is might be difficult to say. But, waiving this point, a more positive difficulty presents itself.

Past, present, and future are incompatible determinations. Every event must be one or the other, but no event can be more than one. This is essential to the meaning of the terms. And, if it were not so, the A series would be insufficient to give us, in combination with the C series, the result of time. For time, as we have seen, involves change, and the only change we can get is from future to present, and from present to past.

The characteristics, therefore, are incompatible. But every event has them all. If M is past, it has been present and future. If it is present, it has been future and will be past. If it is future, it will be present and past. Thus all the three incompatible terms are predicable of each event, which is obviously inconsistent with their being incompatible, and inconsistent with their producing change.

It may seem that this can easily be explained. Indeed it has been impossible to state the difficulty without almost giving the explanation, since our language has verb-forms for the past, present, and future, but no form that is common to all three. It is never true, the answer will run, that M *is* present, past and future. It *is* present, *will be* past, and *has been* future. Or it *is* past, and *has been* future and present, or again *is* future and *will be* present and past. The characteristics are only incompatible when they are simultaneous, and there is no contradiction to this in the fact that each term has all of them successively.

But this explanation involves a vicious circle. For it assumes the existence of time in order to account for the way in which moments are past, present and future. Time then must be pre-supposed to account for the A series. But we have already seen that the A series has to be assumed in order to account for time. Accordingly the A series has to be pre-supposed in order to account for the A series. And this is clearly a vicious circle.

What we have done is this—to meet the difficulty that my writing of this article has the characteristics of past, present and future, we say that it is present, has been future, and will be past. But "has been" is only distinguished from "is" by being existence in the past and not in the present, and "will be" is only distinguished from both by being existence in the future. Thus our statement comes to

this—that the event in question is present in the present, future in the past, past in the future. And it is clear that there is a vicious circle if we endeavour to assign the characteristics of present, future and past by the criterion of the characteristics of present, past and future.

The difficulty may be put in another way, in which the fallacy will exhibit itself rather as a vicious infinite series than as a vicious circle. If we avoid the incompatibility of the three characteristics by asserting that M is present, has been future, and will be past, we are constructing a second A series, within which the first falls, in the same way in which events fall within the first. It may be doubted whether any intelligible meaning can be given to the assertion that time is in time. But, in any case, the second A series will suffer from the same difficulty as the first, which can only be removed by placing it inside a third A series. The same principle will place the third inside a fourth, and so on without end. You can never get rid of the contradiction, for, by the act of removing it from what is to be explained, you produce it over again in the explanation. And so the explanation is invalid.

Thus a contradiction arises if the A series is asserted of reality when the A series is taken as a series of relations. Could it be taken as a series of qualities, and would this give us a better result? Are there three qualities—futurity, presentness, and pastness, and are events continually changing the first for the second, and the second for the third?

It seems to me that there is very little to be said for the view that the changes of the A series are changes of qualities. No doubt my anticipation of an experience M, the experience itself, and the memory of the experience are three states which have different qualities. But it is not the future M, the present M, and the past M, which have these three different qualities. The qualities are possessed by three distinct events—the anticipation of M, the experience M itself, and the memory of M, each of which is in turn future, present, and past. Thus this gives no support to the view that the changes of the A series are changes of qualities.

But we need not go further into this question. If the characteristics of the A series were qualities, the same difficulty would arise as if they were relations. For, as before, they are not compatible, and, as before, every event has all of them. This can only be explained, as before, by saying that each event has them successively. And thus

the same fallacy would have been committed as in the previous case.[1]

We have come then to the conclusion that the application of the A series to reality involves a contradiction, and that consequently the A series cannot be true of reality. And, since time involves the A series, it follows that time cannot be true of reality. Whenever we judge anything to exist in time, we are in error. And whenever we perceive anything as existing in time—which is the only way in which we ever do perceive things—we are perceiving it more or less as it really is not.

We must consider a possible objection. Our ground for rejecting time, it may be said, is that time cannot be explained without assuming time. But may this not prove—not that time is invalid, but rather that time is ultimate? It is impossible to explain, for example, goodness or truth unless by bringing in the term to be explained as part of the explanation, and we therefore reject the explanation as invalid. But we do not therefore reject the notion as erroneous, but accept it as something ultimate, which, while it does not admit of explanation, does not require it.

But this does not apply here. An idea may be valid of reality though it does not admit of a valid explanation. But it cannot be valid of reality if its application to reality involves a contradiction. Now we began by pointing out that there was such a contradiction in the case of time—that the characteristics of the A series are mutually incompatible and yet all true of every term. Unless this contradiction is removed, the idea of time must be rejected as invalid. It was to remove this contradiction that the explanation was suggested

[1] It is very usual to present Time under the metaphor of a spatial movement. But is it to be a movement from past to future, or from future to past? If the A series is taken as one of qualities, it will naturally be taken as a movement from past to future, since the quality of presentness has belonged to the past states and will belong to the future states. If the A series is taken as one of relations, it is possible to take the movement either way, since either of the two related terms can be taken as the one which moves. If the events are taken as moving by a fixed point of presentness, the movement is from future to past, since the future events are those which have not yet passed the point, and the past are those which have. If presentness is taken as a moving point successively related to each of a series of events, the movement is from past to future. Thus we say that events come out of the future, but we say that we ourselves move towards the future. For each man identifies himself especially with his present state, as against his future or his past, since the present is the only one of which he has direct experience. And thus the self, if it is pictured as moving at all, is pictured as moving with the point of presentness along the stream of events from past to future.

that the characteristics belong to the terms successively. When this explanation failed as being circular, the contradiction remained unremoved, and the idea of time must be rejected, not because it cannot be explained, but because the contradiction cannot be removed.

What has been said already, if valid, is an adequate ground for rejecting time. But we may add another consideration. Time, as we have seen, stands and falls with the A series. Now, even if we ignore the contradiction which we have just discovered in the application of the A series to reality, was there ever any positive reason why we should suppose that the A series *was* valid of reality?

Why do we believe that events are to be distinguished as past, present and future? I conceive that the belief arises from distinctions in our own experience.

At any moment I have certain perceptions, I have also the memory of certain other perceptions, and the anticipation of others again. The direct perception itself is a mental state qualitatively different from the memory or the anticipation of perceptions. On this is based the belief that the perception itself has a certain characteristic when I have it, which is replaced by other characteristics when I have the memory or the anticipation of it—which characteristics are called presentness, pastness, and futurity. Having got the idea of these characteristics we apply them to other events. Everything simultaneous with the direct perception which I have now is called present, and it is even held that there would be a present if no one had a direct perception at all. In the same way acts simultaneous with remembered perceptions or anticipated perceptions are held to be past or future, and this again is extended to events to which none of the perceptions I now remember or anticipate are simultaneous. But the origin of our belief in the whole distinction lies in the distinction between perceptions and anticipations or memories of perceptions.

A direct perception is present when I have it, and so is what is simultaneous with it. In the first place this definition involves a circle, for the words "when I have it," can only mean "when it is present". But if we left out these words, the definition would be false, for I have many direct presentations which are at different times, and which cannot, therefore, all be present, except successively. This, however, is the fundamental contradiction of the A series, which has been already considered. The point I wish to consider here is different.

The direct perceptions which I now have are those which

now fall within my "specious present". Of those which are beyond it, I can only have memory or anticipation. Now the "specious present" varies in length according to circumstances, and may be different for two people at the same period. The event M may be simultaneous both with X's perception Q and Y's perception R. At a certain moment Q may have ceased to be part of X's specious present. M, therefore, will at that moment be past. But at the same moment R may still be part of Y's specious present. And, therefore, M will be present, at the same moment at which it is past.

This is impossible. If, indeed, the A series was something purely subjective, there would be no difficulty. We could say that M was past for X and present for Y, just as we could say that it was pleasant for X and painful for Y. But we are considering attempts to take time as real, as something which belongs to the reality itself, and not only to our beliefs about it, and this can only be so if the A series also applies to the reality itself. And if it does this, then at any moment M must be present or past. It cannot be both.

The present through which events really pass, therefore, cannot be determined as simultaneous with the specious present. It must have a duration fixed as an ultimate fact. This duration cannot be the same as the duration of all specious presents, since all specious presents have not the same duration. And thus an event may be past when I am experiencing it as present, or present when I am experiencing it as past. The duration of the objective present may be the thousandth part of a second. Or it may be a century, and the accessions of George IV. and Edward VII. may form part of the same present. What reason can we have to believe in the existence of such a present, which we certainly do not observe to be a present, and which has no relation to what we do observe to be a present?

If we escape from these difficulties by taking the view, which has sometimes been held, that the present in the A series is not a finite duration, but a mere point, separating future from past, we shall find other difficulties as serious. For then the objective time in which events are will be something utterly different from the time in which we perceive them. The time in which we perceive them has a present of varying finite duration, and, therefore, with the future and the past, is divided into three durations. The objective time has only two durations, separated by a present which has nothing but the name in common with the present of experience, since it is not a duration but a point. What is

there in our experience which gives us the least reason to believe in such a time as this?

And so it would seem that the denial of the reality of time is not so very paradoxical after all. It was called paradoxical because it seemed to contradict our experience so violently—to compel us to treat so much as illusion which appears *primâ facie* to give knowledge of reality. But we now see that our experience of time—centring as it does about the specious present—would be no less illusory if there were a real time in which the realities we experience existed. The specious present of our observations—varying as it does from you to me—cannot correspond to the present of the events observed. And consequently the past and future of our observations could not correspond to the past and future of the events observed. On either hypothesis—whether we take time as real or as unreal—everything is observed in a specious present, but nothing, not even the observations themselves, can ever *be* in a specious present. And in that case I do not see that we treat experience as much more illusory when we say that nothing is ever in a present at all, than when we say that everything passes through some entirely different present.

Our conclusion, then, is that neither time as a whole, nor the A series and B series, really exist. But this leaves it possible that the C series does really exist. The A series was rejected for its inconsistency. And its rejection involved the rejection of the B series. But we have found no such contradiction in the C series, and its invalidity does not follow from the invalidity of the A series.

It is, therefore, possible that the realities which we perceive as events in a time-series do really form a non-temporal series. It is also possible, so far as we have yet gone, that they do *not* form such a series, and that they are in reality no more a series than they are temporal. But I think—though I have no room to go into the question here—that the former view, according to which they really do form a C series, is the more probable.

Should it be true, it will follow that in our perception of these realities as events in time, there will be some truth as well as some error. Through the deceptive form of time, we shall grasp some of their true relations. If we say that the events M and N are simultaneous, we say that they occupy the same position in the time-series. And there will be some truth in this, for the realities, which we perceive as the events M and N, do really occupy the same position in a series, though it is not a temporal series.

Again, if we assert that the events M, N, O, are all at different times, and are in that order, we assert that they occupy different positions in the time-series, and that the position of N is between the positions of M and O. And it will be true that the realities which we see as these events will be in a series, though not in a temporal series, and that their positions in it will be different, and that the position of the reality which we perceive as the event N will be between the positions of the realities which we perceive as the events M and O.

If this view is adopted, the result will so far resemble those reached by Hegel rather than those of Kant. For Hegel regarded the order of the time-series as a reflexion, though a distorted reflexion, of something in the real nature of the timeless reality, while Kant does not seem to have contemplated the possibility that anything in the nature of the noumenon should correspond to the time order which appears in the phenomenon.

But the question whether such an objective C series does exist, must remain for future discussion. And many other questions press upon us which inevitably arise if the reality of time is denied. If there is such a C series, are positions in it simply ultimate facts, or are they determined by the varying amounts, in the objects which hold those positions, of some quality which is common to all of them? And, if so, what is that quality, and is it a greater amount of it which determines things to appear as later, and a lesser amount which determines them to appear as earlier, or is the reverse true? On the solution of these questions it may be that our hopes and fears for the universe depend for their confirmation or rejection.

And, again, is the series of appearances in time a series which is infinite or finite in length? And how are we to deal with the appearance itself? If we reduce time and change to appearance, must it not be to an appearance which changes and which is in time, and is not time, then, shown to be real after all? This is doubtless a serious question, but I hope to show hereafter that it can be answered in a satisfactory way.

## II.—PROFESSOR LAURIE'S NATURAL REALISM.[1]

By Professor Baillie.

### I.

### The Epistemology of Natural Realism.

It has been said that the kingdom of truth does not come by observation. At any rate, in the present case, the meditations of one of the high priests in the temple of wisdom have not been interrupted or disturbed by the noisy wrangling of the market-place hard by. While 'pragmatism' is recommending its wares as a bargain for 'common sense,' there is one near at hand gathering a harvest of quiet thought by critically considering what common sense contains. While 'humanism' comes before the practical plain man with a good-natured apologia for the business of the philosopher, Prof. Laurie patiently leads the plain man to a knowledge of the philosophy implied in the very workings of the plain man's mind. The one seeks to make philosophy acceptable by forcing it to adopt the bluff off-hand methods and energetic decision of the man in the street; the other compels this hypothetical personage to undergo the severe ordeal of systematic reflexion before he wins the title even to the philosophy of his own familiar experience. To the one the 'common mind' is a final criterion which decides the efficacy of a philosophy by asking whether and how it works; to the other the common mind is a starting-point from which the work of philosophy only begins. On the one view, philosophy is in the dock, apparently for the crime of marrying too many universals, while plain men form the jury; on the other, philosophy is in the judgment seat summing up the case of everyday human experience, while the plain man is called upon to play the somewhat dubious *rôle* of the expert witness.

[1] *Synthetica, being Meditations, Epistemological and Ontological*, by S. S. Laurie, LL.D., author of *Metaphysica Nova et Vetusta*, etc., Gifford Lecturer in Edinburgh, 1905-6. 2 vols. Longmans, 1906.

There is nothing in these pages, then, which panders to the prevailing philosophical temper of the present day. The problems discussed have been anxiously considered for the better part of a long life; the solutions offered cover most of the deepest questions of the human mind, and represent the mature conclusions of one of the profoundest speculative intellects of our time. Every page in these volumes reveals a strong man grappling in a living way and at close quarters with the vital meaning of his own experience, an experience which to him is typical of what he modestly calls the naïve intelligence. There is nothing here of the dilettantism which, more or less sentimentally, treats philosophy as an interesting curiosity for spare hours; and nothing whatever of the intellectual valetudinarianism which covers its mental timidity in speculative matters behind a highly-strung logomachy. Prof. Laurie is well aware of 'the burden and the weary weight of all this unintelligible world,' but refuses, because he cannot consent, to throw off the burden till the mental peace that comes with understanding has in a measure lightened it. The philosopher is a man of sorrows and acquainted with intellectual grief, a man who is prepared to face "the striving and struggle and pain which, explain it how we may, lie at the root of the life of all who inherit the fatal gift of reason".[1]

One who thus finds necessity laid upon him to explain his experience has a perfect right, which no serious mind dare gainsay, to adopt his own method of performing his destined task, and his own manner of expressing his meaning. In the present case both of these are characteristic of the man, and have a peculiarity which heightens the interest of his work. The method he adopts is that of "Meditations" on the various aspects of experience which are of chief importance for the comprehension of the whole, and which have a primary significance in experience. While the ground plan and general design of the whole are never lost sight of, and induce a certain order in the sequence of the Meditations, he takes up each prominent part of the structure of his argument as a separate object of thought, and is more at pains to describe the nature and value of the controlling positions of the building than to deal with the pointing of the walls or the details of the tracery. We have thus a series of points of view from which to regard the whole rather than a precise arrangement of steps in the development of a rigorously connected system. Moreover,

[1] *Synthetica*, i., 316.

the mood of 'Meditation' is conveyed less by argument in detail and in defence of each statement, than by insight born of the conviction that comes with individual vision. Not that argument, subtle and strong, is wanting; but the first and last proof throughout is that of immediate insight, 'I see,' 'experience tells me,' 'this is what I find'; and against such proof there is in the nature of the case no appeal. Meditation in fact is rather self-communion than communication; and the thinker expects his statements to be met not so much by controversy as by corroboration. There need not be, and in the present case there is not, any arbitrariness in such a mode of procedure. On the contrary, it is a way of emphasising at once the modest limitations and the independent veracity of the individual thinker. Moreover, it is transparent that in the last resort apprehension of truth is rooted in immediacy of insight, and that direct apprehension does not necessarily exclude systematic demonstration of a truth, but is often an elliptical way of arriving at it. In the present instance the interest and force which the exposition gains from this highly personal method of statement, amply compensate for any absence of detailed defensive proof that might be felt desirable here and there. Perhaps, too, Prof. Laurie might maintain that for certain positions no rigid proof is really possible, and that the issue must be, and may safely be, left to the experience and insight of the individual thinker. As he says (*Synthetica*, ii., 1), "ultimate philosophy does not take the form of a demonstration, but is rather as lucid a statement as possible of what we *see*. Merely to *see* is the end of all cognitive activity."

The author's manner of expression is of a piece with his method of reflexion, and is equally defensible. There is not the slightest attempt, except in a few obviously rhetorical passages, to adorn an intensely abstract argument with the meretricious devices of the literary artist. The style is as severely formal and technical as the subject-matter, and this high level of thought and expression is sustained from beginning to end. The reader's attention is never distracted from the generality of the ideas by picturesqueness of statement. The author's terms and conceptions are, however, so clearly grasped and so consistently used that the result, so far from being affected by his manner of exposition, positively gains in effectiveness and impressiveness. It is a very high intellectual pleasure to follow an argument thus conducted and confined simply and solely within the medium of conceptual reflexion. No doubt one has to read the theory with a certain command of human experience and

philosophical training to guide one's thought and enable it to find the genuine richness of the meaning of the statements. But these requirements the author has a right to expect of those who desire the kind of truth he has to tell, or who wish to know what he has to say. He is not writing a primer on philosophy, but making a substantial contribution to man's speculative knowledge of human destiny. Those, and doubtless they are many, whose minds do not crave for this knowledge or whose training does not enable them to appreciate this contribution, are hardly in a position to complain of the manner of treatment. On the other hand, those who read the discussion with the requisite equipment cannot fail to admire this masterly achievement of sustained abstract thinking. They will recognise in it too one of the greatest contributions to speculative philosophy which has appeared in English for many years. There are few philosophical problems of outstanding importance on which Prof. Laurie has not long reflected, and on which he does not throw fresh light. On some of the problems indeed he has left little more to be said. With the general outline of his interpretation,—which is only new in the sense that he has restored to recognition an ancient and enduring principle of synthesis, and endowed it with all the vitality of his own strong and vigorous intellect,—there seems less ground for dispute than with any other that has been advanced. On special points he has a fertility of suggestion and resource which animate old ideas with new life, and invariably stimulate even when they do not satisfy.

So much by way of preliminary. These introductory remarks seemed necessary in view of the apparent neglect with which this work has so far been received.

The work is divided into two portions: Epistemology and Ontology. They cannot be separated, and much of what is developed expressly by the one is implied in the construction of the other; and both have common underlying ideas which only the complete exposition evolves and justifies. But they can be clearly and sharply distinguished as philosophical problems. The former deals with the nature, the forms and the growth of the consciousness of an object in the individual man's mind, "the analysis of our individual selves as conscious of objects and self-conscious".[1] The Ontology deals with the nature and content of the ultimate synthesis of man's experience—God as the Absolute, so far as this is interpretable from the plane of man's experience.

[1] *Synthetica*, i., 320.

In Ontology we leave behind the various stages through which the human subject-object relation passes before reaching its consummation, and concern ourselves solely with what, at this highest form, man's mind 'reveals' or 'sees' of the ultimate Reality underlying and controlling all his experience. In Epistemology, therefore, we are occupied with the process of human knowledge, in Ontology with its final goal and highest reach. In both the Absolute is present, 'the master light of all our seeing,'—in the former implicitly, as the source whence all the various forms take their rise, and by which they are all dominated; in the latter explicitly, as an object of specific consideration by itself. In the first, because the absolute is only implicit, we have diverse forms of human knowledge, scattered 'broken lights' of the complete truth; in the second, where the Absolute is our explicit object, we have the steady gaze of unbroken vision, revealing the whole as a whole to the utmost of our human capacity. Thus while in a way all the stages of knowledge, ontology included, fall within the compass of epistemology, from the other point of view all that epistemology contains falls within ontology. Yet the two are sufficiently distinct to justify specifically different treatment. If we bear in mind their different character we will find no difficulty in the fact that practically nothing is said in the epistemological part (vol. i. of the *Synthetica*) regarding the highest stage of human knowledge, 'rational intuition,' while the whole of the ontological part (vol. ii.) is neither more nor less than an exposition of what this 'rational intuition' reveals. Prof. Laurie is, as a philosopher, much more interested in God and Immortality than in the more restricted realities of sense perception or science. It is in fact, as Kant said, the *métier* of the speculative mind to consider those limiting conceptions that stretch the powers of human comprehension to their utmost. But no philosopher can afford to ignore the knowledge which deals with more limited areas of human truth; he is bound for the sake of thoroughness to show the place of speculative vision in the scheme of experience, and the relation of this kind of knowledge to the other forms of the cognitive attitude. Hence the study of the process of knowledge is in a sense a preparation for, and in a sense a justification of, the speculative apprehension of the Absolute which occupies the ontology. The ontology is the main interest of these meditations making up the *Synthetica*, for the obvious reason that the end is the main interest of any undertaking. The end of Prof. Laurie's meditations is frankly to 'see God'. 'It is our prerogative as it is our

duty to know God by and in the things that He has made.'[1] In a manner, therefore, the critical analysis of the stages of knowledge previous to that in which Ontology is developed, is introductory, necessary though this introduction may be.

The Epistemology is of profound importance in itself apart altogether from its relation to Prof. Laurie's ontological synthesis. Thanks to a considerable amount of recapitulation, there is no room for doubt as to the main ideas it contains and the main principle it involves.

The general point of view is simplicity itself, and can be stated in very few words. With certain necessary reservations, it is that enunciated by Wordsworth in the lines :—

> For the discerning intellect of man,
> When wedded to this goodly universe
> In love and holy passion, shall find them
> A simple produce of the common day.
> . . . my voice proclaims
> How exquisitely the individual mind
> (And the progressive powers perhaps no less
> Of the whole species) to the external world
> Is fitted :—and how exquisitely, too,
> Theme this but little heard of among men,
> The external world is fitted to the mind.

'With the necessary reservations,' because the aims of poet and philosopher are different : but the point of view is the same in the two cases, as will be presently seen.

To Prof. Laurie the starting-point of man's experience is the distinction in unity of subject and object. These are not only distinct in a logical way, but really substantive entities, each on its own account. They are 'given' thus, and any attempt to deny this makes experience as we find it illusory. The one is the 'subject-thing,' the other the 'object-thing'. So strongly does he insist on their independence that he goes the length of saying (a statement hardly borne out by his analysis elsewhere) that if all 'finite subject-things died the object-thing would go on'.[2] This given independence of these ultimate elements of experience he calls 'Natural Realism,'[3] the '*naïveté* of the common man,' 'the doctrine of common sense'. This position he maintains and seeks to justify throughout his argument, and hence describes his theory as that of 'natural realism'.

Again, these two elements while given as independent reals yet only have their being in inalienable conjunction. The subject is only subject through the object and *vice versâ*. They subsist together in a single concrete identity.[4] From

[1] *Synthetica*, i., 319.
[2] *Ibid.*, i., 10.
[3] *Ibid.*, i., 11, 80, 264, etc.
[4] *Ibid.*, i., 89 ff., 317.

this side they are dual constituents in a single unity, and *are* only by being thus interwoven. They are not so much related, and not at all 'relative';[1] they are fused in an identity which sustains their differences. Looked at in this way the theory is described as Dualism.[2]

Further, there is One Being underlying and containing all the different elements into which Reality is broken up. "All is One," as Prof. Laurie repeats, and this One embraces man as well as all other individuals or things. The theory in this sense is monistic. But it is not an abstract monism. The many subsist and each is for itself. The Ultimate universal One has negation or self-distinction in the very heart of it and breaks up into moments. These appear as "determinate individuals," which vary in form from the atom to man, and constitute grades of individuality.[3] These are all separated *inter se*, and have a core of reality all their own. This gives the theory a pluralistic cast, an aspect which is strongly insisted on by the author. But he never maintains this at the expense of the monistic principle, and hence combines the two by describing his theory as a 'Monistic Pluralism,"[2] or again 'Monistic Dualism,'[4] a term, which, as he says, contains only an apparent contradiction.

There is only a difference of emphasis implied in using these various expressions to characterise the point of view he adopts. The 'monism' refers to the all containing whole *as such;* the 'pluralism' to the endlessly diverse individuals separate *inter se*, the 'many' as such, in virtue of which the whole *is* a 'one'; the dualism refers to the specific case of diversity in unity which we have in the relation of subject and object in man's experience; the 'natural realism' to the fact that subject and object are in man's experience consciously given as independent, that the subject, in being aware of object, is aware of a real that is separate from itself, and is aware that the 'thing *is* as the subject *sees* it'.[5] The theory is 'monistic pluralism' when we take the point of view of Ultimate Reality; and 'natural realism' when we think of the process of finite human knowledge.

In a sense we might say that Prof. Laurie's epistemological problem is to find how these points of view can be harmonised. The solution he offers is based on the conception of what he calls 'planes of mind,' or kinds and degrees of mental experience—a most valuable and fruitful epistemological idea, and one which he works out with remarkable thoroughness and ingenuity. The concep-

[1] *Cf.* 84, 103, 317. [2] *Syn.*, i., 80, 124. [3] *Cf. Syn.*, i., 216, 220.
[4] *Ibid.*, i., 216, 220, 224, 245, 262, 264. [5] *Syn.*, i., 80.

tion implies certain conditions, if it is to be successfully developed. We must have a starting-point which is ultimate for mind; we must have an end or standard by which to determine what the 'planes of mind' are, and in what order of value for knowledge they are to be placed; and lastly, throughout the whole we must have a continuous manifestation of a single principle from first to last.

This single principle, to take the third point first, is the subject-object relation constituting mind-experience. Without this relation either implicitly or explicitly present there is no mind at all and no experience to explain. It is the beginning and the end; further than this we cannot go. It must be 'granted';[1] we find it as a 'matter of fact'. In the long run we cannot say 'how' it comes about; no man can explain what the subject is.[2] We may say subject is the supreme expression of absolute or universal mind.[3] But this is not explaining the 'how' or the 'why' of the matter. What we do know is that subject and object are found throughout experience as its constituent elements, each by itself real, and that their relation, whatever it be, constitutes experience.[4] The subject-object relation is sometimes regarded as cognitive, as knowing generally, but distinct from knowing in the narrower sense;[5] sometimes as merely consciousness. What we have to do, and all we can do, is to show the forms which this relation assumes in mental life.

The highest stage, again, which is also the standard for determining the order of the other forms of mind, is that level where the free activity[6] of the subject clearly and distinctly sees its object as an organic rational whole, a whole which, because rational, is felt to be continuous and one with the subject's own rational nature. This stage is never in its fullness quite attained[7] by finite mind, but is rather 'predicted'; our knowledge even at this stage is under limitations of finitude; but so much as we do attain of that stage is of a piece with the highest conceivable form of mind. The stage is called 'Rational Intuition'. At this stage alone do we 'see God'.

By reference to what is implied in this plane of mind, we can determine what the other stages are and how to arrange them. Intuition implies (1) pure free activity; (2) complete self-consciousness, *i.e.*, consciousness of self in object, or of

[1] *Syn.*, i., 13. [2] *Ibid.*, i., 153. [3] *Cf. Syn.*, i., 130, 246.
[4] Experience is used at times for the 'object' as well as the relation. *Cf.* p. 318.
[5] *Syn.*, i., 206. [6] The "will-reason," to use Prof. Laurie's phrase.
[7] *Syn.*, i., 36.

object as self, and hence clear distinction in unity of subject and object; (3) harmonious synthesis, and hence the absence of the contradictions which 'mediate' knowledge reveals. The lower levels of mind fail in one or more of these characteristics. They are however all forms of mind and therefore contain *impliciter* what is found in the highest. They all involve *activity;* knowing is an 'act';[1] but at the lower levels the activity is not pure activity, it contains, *e.g.*, 'passivity'. They all imply subject; they also imply synthesis; and finally all reveal ultimate Reality, communicate the Absolute to finite mind.

The lowest or primary level of mental life, or as Prof. Laurie calls it, the 'primal actualisation' of mind, is easily determined from the foregoing statement of the highest, and its connexion with the other forms. The lowest stage is that where even the distinction of subject and object is not clearly made as a conscious fact, where the subject is sunk in the object, or again where the object overpowers the subject's distinctive reality. Subject and object are here fused or suffused in a continuous immediacy, the immediacy of 'feeling'[2]. Here we have 'a vague indefinite diffused state of being,' where 'nothing is differentiated'. It is bare, yet barely, conscious life. It is not 'consciousness proper,'[3] for there is no 'other' which is necessary for consciousness proper to arise. This stage of pure feeling is the simplest form in which mind-life can be realised. Yet it is a stage and an important stage: for at this level we have the simplest expression of the Absolute. The Absolute is found here in the form of unconditioned Being,[4] and this aspect of bare Being is present throughout the whole of experience, however complex and differentiated or 'conditioned' the Absolute may become at later stages of mind. The simple feeling state of mind is our way of realising the primary characteristic of the Absolute. Feeling is the basis of experience, and is the being of mind, of 'finite' and 'infinite' mind alike.

Prof. Laurie makes much of this primal stage; and with good reason.[5] Many, *e.g.*, Lotze, have insisted on the profound significance of feeling in experience. Feeling has been spoken of as the bedrock of reality for man's spirit; it is here we have been told, we 'touch reality,' because we 'live it'. So far has this been carried that all our conceptual knowledge has been held to gain validity by its reference to

[1] *Syn.*, i., 206.
[2] *Ibid.*, i., 13. By 'feeling' is not meant 'pleasure or pain'. See the interesting remarks on this point, pp. 19 f.
[3] *Ibid.*, p. 16. [4] *Ibid.*, i., 17. [5] *Ibid.*, v., p. 45 ff.

the 'reality' met with in 'feeling'; and a form of dualism has been set up between 'formal' 'conceptual' knowledge and 'concrete' feeling irreducible to conception. But views of this kind in no way express Prof. Laurie's position. His theory is much more profound and far-reaching. His point is that in feeling we have the Absolute as being, though mere being undifferentiated and 'unconditioned'; that this being is the ground of and is involved in all further diversity which arises; that every stage and phase of experience has or is being (whatever else over and above, whatever 'conditionedness,' it may contain); that the feeling is not a stage remaining apart and by itself to which 'knowledge refers,' but is a factor or element in every later stage; that in the feeling-state subject and object are there already (though implicitly), giving us being in and through their fusion which *is* feeling. In short, to Prof. Laurie, feeling is the primordial basis from which the rest of experience is merely developed, and which is never left behind or done away with in the process. It is reflective analysis which assigns feeling this position as the starting-point of experience. As a matter of fact we never do get the feeling-state *by itself*. As a state *per se* it is long past and almost forgotten.[1] But it remains with us now in all the complexity which we know.

The feeling-state has a further importance on this theory. Since feeling gives us being and remains with us in all experience, we are never at any stage of knowledge out of touch with absolute reality. At the lowest as well as at the highest, knowledge is real and of the ultimately real; our consciousness is an awareness of being all along the line.[2] Not merely so, but the truth at each stage is absolutely true. On such a theory there *can* be no truth which is not absolute truth; relativism in any sceptical sense disappears.[3]

Finally the continuity or "oneness" of that being revealed to us in feeling is used by Prof. Laurie in a quasi-mystical manner, which recalls certain forms of religion, to interpret how it is that we have the sense of kinship with all kinds and grades of existence. This is ingeniously developed, and is expressed with a certain repressed emotion in one of the most suggestive meditations in the book.[4]

It is necessary to bring out the importance of this first stage in experience, because in a manner it anticipates the whole course of Prof. Laurie's line of argument, and the

[1] *Syn.*, i., 51.

[2] Thus even though we have no complete knowledge of the Infinite, we still do know the 'fact' of the Infinite, v., p. 274.

[3] *Cf. Syn.*, i., 97, 103, 120, 122, 189, 224. [4] Med. v.

development of the significance of this 'plane of mind' is one of the most valuable and original portions of Prof. Laurie's theory. No systematic thinker in recent years, with the doubtful exception of Mr. Bradley, has grasped so strongly or stated so convincingly the epistemological significance of the feeling-state of experience. If his view be granted, sensationalism on the one hand, and crude dualism with its doctrine of relativity on the other, are dismissed in a single breath.

Passing from pure feeling we may indicate more briefly the immediately succeeding stages. It is impossible, says our author, to trace all the steps in the evolution of mind. We can only take up the more prominent, keeping in view, however, that the whole course of the evolution is continuous. The next plane is that of awareness of particular differences of feeling, a stage only slightly removed from the preceding.[1] This form prepares the way for the dawn of 'consciousness proper' (awareness of a distinct other) in 'sentience' or 'sensation'. The important point here is the awakening of the consciousness of an other and the assimilation by the subject of this other *as* other. Both factors are essential. In virtue of the first the subject is passive in the process, in virtue of the second it is active. The process is therefore called 'passivo-active'; or to use the more common expression, it is 'reflex-activity'. 'Receptivity' it might be and is often called; but this tends to lay too much stress on the merely passive side. The active aspect contains implicitly the very principle which later on appears as rational co-ordination, and is the first appearance of that specific initiation by which the subject becomes *consciously* a determinate entity for itself. Moreover, the process of reacting is not merely a condition of sensation, it *is* sensation; and reflex-activity establishes by its very process the consciousness of an other. To react on a 'stimulus' is *ipso facto* to make it 'other' than the subject reacting, and hence to distinguish subject from it. That is all the 'stimulus' is to begin with; it is non-subject, is 'other'. And this bare negation of the subject is the beginning and the first form of the 'object-entity'.[2]

The elementary form of sensation is confined to an organic life *per se*, is in a sense intra-organic; the other is merely *not*-subject. When this non-subject becomes more definite, fixed and uniform in character, we have a higher form of

[1] Both these first two stages may be said to be strictly speaking 'below consciousness,' p. 27.

[2] *Cf. Syn.*, i., 19 and ff., pp. 317-318.

precisely the same experience, but one full of significance for later developments of mind. When the object in sentience becomes a continuous uniform other for the subject, it is space or Being in spatial form. This permanent fixed other is an 'outer' for the subject. Hence arises the distinction of internal and external, inner and outer, which is thus a further development of the subject-object relation at *the level of sense*. Thereafter sense-experience evolves into more detailed differences, through 'localisation' and so on, much in the way psychology has from time to time tried to describe. It is after the space factor has 'sprung into consciousness' that sentience makes its highest contribution to knowledge. The content of what is presented is grouped by the reflex-activity of the subject into separate wholes or totals of sense, related *inter se* according to general sense conditions (*e.g.*, spatially and temporally). This grouping is not a unifying or synthesis[1] of the elements within these totals, for the elements in many cases are not discriminated at all, and in all cases only one or other element is predominant. The whole is simply a sense whole or whole of sense, accepted by or given to the subject as a total sense object. It is not judgment,[2] at least not explicitly. The grouping is called by Prof. Laurie 'synoptic,' not synthetic. This, the highest level or contribution of sensation, is the plane of 'attuition'.[3]

The reader may or may not regard this purely technical term as appropriate for the function of mind the author is here describing. There can, however, be no doubt that we have here a level of experience of a peculiar kind, and one to which perhaps no current philosophical term is quite suitable. As long as we understand what the experience referred to is, it is useless affectation to disagree with the author's terminology which is certainly most convenient, and is consistently used throughout his argument. He goes on to develop with great completeness the significance of this stage. It is here that we meet with 'givenness'; with 'phenomena,' 'the sense-form of the ultimately real';[4] with the 'real' in the sense of brute fact, the real which is yet phenomenal; with 'matter' as known to sense, in the two-fold character which we call 'primary' and 'secondary' 'qualities'. It has its own general forms of 'synopsis,' its ways of grouping the given phenomena. These Prof. Laurie calls 'categories of the given,' space, time and motion, quantity, etc., looked at, not as 'pure categories' of reason, but as concretely determining the contents of sense, and

[1] *Syn.*, i., 93 ff.
[2] *Ibid.*, i., 27.
[3] *Ibid.*, i., 28, 77, 144, etc.
[4] *Ibid.*, i., 64.

apprehended as sensuous. In dealing with this plane of experience the author again insists on the fact that knowledge is neither cut off from reality, nor breaks down the independence of the object. We have reality here, absolute reality, up to the measure of the subject's capacity at this plane. Moreover, the object finds its own true fulfilment and significance by becoming for the subject, by entering into the life of the subject.[1] The author's treatment of the historic problem of primary and secondary qualities in this connexion is quite complete, and seems to have settled the question once for all.[2]

It is impossible, however, to do full justice in a short compass to the wealth of light which Prof. Laurie has brought to bear on the difficult questions which arise out of the form of experience here discussed. We would merely refer the reader to the meditations on 'Phenomenon' and on 'The Given' (Med. vi. and viii.), which contain an admirable analysis of the facts of sense-experience.

What we have so far dealt with refers to one of the two chief divisions into which human experience falls,[3]—consciousness and self-consciousness. In the former the object is always *given* or accepted, not made, or affirmed; the attitude is synoptic not synthetic, the activity is 'passive' or reflex not spontaneously initiated. But there is a mode of experience involving and expressing greater command over the object on the part of the subject, greater freedom in the use of ideas, greater intimacy between subject and object. These facts direct our attention to forms of activity to which the term self-consciousness is applied. They *presuppose* a clear consciousness of the subject by the subject itself.[4] 'The formal act of the new movement'[5] is the apprehension of the attuitional subject as object, an act which yields us the fact of self or ego.[6] In other words when subject by the inherent activity constituting its nature turns the *subject* into an object, the subject becomes *self*, and we pass from consciousness of object as merely *not* the subject to consciousness of self. The function here is purely synthetic; subject and object are essentially *united;* and it is purely universal, for the subject is expanded into and finds itself in object. This function is *reason.* The function is also inherently and spontaneously an active function; it is *will.* Prof. Laurie rightly enough, therefore, describes the function at the basis of the whole range of this experience, as 'will-

[1] *Syn.*, i., 89 ff. [2] *Cf.* p. 114 ff. [3] *Syn.*, i., 135.
[4] *Ibid.*, i., 165. [5] *Ibid.*, i., 137. [6] *Cf. Syn.*, i., 140, 162, 167.

reason'. Not that feeling is absent; but now instead of being primary it is implicit; the stage is *primarily* and explicitly that of will-reason.

In contrast, then, to all that has preceded we now have new forms of experience, new factors and terms and new modes of procedure. In the previous stages we had attuition, here we have reason; there we had synopsis, here synthesis; there we had mere conation, 'reaction,' reflex-activity, here volition, 'active-action,' 'dialectic movement'; there the object was 'received' and 'real,' here it is formed and 'actual'.

That there are these vital distinctions in our experience no one can doubt who contemplates what experience reveals to reflective analysis. The real difficulty is to make and keep the distinctions sharp and clear. Our author feels the difficulty keenly, and confesses, when dealing with the earlier stages above-mentioned, that he cannot avoid anticipating the later planes by using methods and terms which certainly imply the function of 'dialectic'.[1] Penetrating and subtle as the analysis of the higher planes of mind is, there seem gaps in the argument here which possibly the author could have filled up in a more extended statement, but which somewhat qualify one's assent, at least at certain points. For instance, in the genesis of self-consciousness no reference is made to the factor of society which seems so all-important in this connexion. Then, again, while he no doubt intends to include in 'will-reason' the course of moral experience,[2] with its forms and conditions of knowledge, the idea of end is discussed as if it were merely concerned with cognitive experience in the narrow sense of the term cognition. But possibly difficulties of this sort arise from the condensed method of exposition, a method which is certainly unavoidable in dealing with the large field covered by self-conscious life.

While there is the difference above noted between the previous stage of attuition and this new plane of 'will-reason,' it must not be supposed that continuity is wanting. Will-reason, while it 'affirms' the object as one with subject, and hence gives us the higher forms of knowledge, thereby merely reaffirms the nature of the object implicit in attuition. It does not create but merely reconstitutes. 'Synopsis' is implicit synthesis, 'synthesis' explicit synopsis. The 'material' is or rather has been already 'given'. Will-reason merely grasps it, and in doing so brings out its essential characters[3] and gives the whole, found in 'attuition,' the coherence of

[1] *Cf. Syn.*, i., 207. [2] *Syn.*, i., 181. [3] *Ibid.*, i., 135.

a known, *i.e.*, rationally constituted, object. The significance of this continuity lies in the fact that we thereby preserve at the level of self-consciousness the 'natural dualism' characteristic of experience, and the objective validity of knowledge referred to above. It is precisely the neglect of this continuity between sense experience and scientific activity which is the defect of Kant and Green on the one hand, and of Pragmatism on the other. When this fact of continuity is admitted, with the consequences above-mentioned, Prof. Laurie's position can be readily adapted to the language of Kant.[1]

The principle of will-reason is operative in distinct but *inseparable* moments,[2] which are again various degrees of knowledge and of realisation of that principle. There is first Perception or Percipience, which involves, according to Prof. Laurie, the operation of reason; in this respect his theory differs considerably from the usual analysis of knowledge. This implication of reason separates perception from 'attuition'. It is doubtless the absence of a current term to express apprehension of a whole at a lower level than perception, which has compelled our author to use the word 'attuition' for this purpose. In Perception the parts of the given whole are discriminated from one another and from all else, and are affirmed of the whole. Perception is judgment.[3] This process involves at once reduction of the contents to the subject, and the externalisation of the result in express form,—in language, in a 'proposition'. The next step is to gather the elements together, and by "sheer force of will"[4] hold them together in a unity. This is Conception or Conceiving, mediating the parts through the whole, the relation of the parts being here quasi-mechanical, an aggregate bound together by a quasi-external force, *viz.*, that of will. The final stage is to 'mediate the whole through the parts,' show the idea of the whole as the ground and inherent necessity of the parts, the unity and the elements within it thus forming a coherent self-sustaining system. This brings out the 'notion,' which is at once the *end* of the whole will-reason process, the idea of the whole, and the essence of the coherently determined individual result.[5]

Throughout all this process, the moments of which are merely distinguishable but inseparable, we must bear in mind that the dialectic is not a 'subjective' affair, but the conscious realisation of the objective nature of things. The

[1] *Cf. Syn.*, i., 165.
[2] *Syn.*, i., 207.
[3] *Ibid.*, i., 149, 159, 166, etc.
[4] *Ibid.*, i., 229.
[5] *Cf. Syn.*, i., 202, 203-204, 208 ff.

dialectic is objective not subjective, or rather is objective and subjective at once. 'Universal Being' 'determines itself dialectically,' and that dialectical nature comes to consciousness in man, is *specifically* man's mind as distinct from that of animals.[1] In Dialectic, therefore, we are still within the assumptions of natural realism, and the results of dialectic are objective and necessary.[2]

Again, while dialectic is primarily mediate in character, it still maintains its hold on the immediacy we found in feeling. All knowing is immediate and mediate at once,[3] and this is precisely the character of dialectic.

Further, though the two factors of 'will' and 'reason' are at best merely aspects of a single process, yet activity, volition, is primary.[4] Reason rests on will, and is primarily kinetic in character. The will referred to here is not will in the sense of moral choice; this is a derived form of will; but will as the active energy of the subject, its active centre from which even the function of perception comes.

It must be admitted that there is some difficulty in seeing clearly in what relation will and reason here stand. At the same time it is no doubt of supreme importance to insist, as Prof. Laurie does, on the fact that they are aspects of a single function rather than separate functions. So far as the point is raised by our author it seems to be treated as inexplicable.[5] The connexion between will and reason seems to be *per saltum* rather than *per continuum*. Probably he would hold that reason is the articulated systematic means through and in which will accomplishes its own self-constituted end. This would be a defensible position, and to some extent an advance on that type of intellectualism which looks on reason as a kind of pale after-glow of the warm light of common day. To regard this point as inexplicable is doubtless unsatisfactory, but is also perhaps unavoidable. On Prof. Laurie's view, possibly on any view, the essential relation between these factors must be treated as inexplicable. The only question is to which element the term can be most safely applied. Much can be said for the position that reason has its root in will; and certainly 'will' does more justice than mere reason to the concrete nature of self-conscious personality, which is rightly held by Prof. Laurie to arise from will.

It is the use, however, to which our author puts the principle of will-reason in explaining the various forms and

[1] *Cf. Syn.*, i., 141 ff.
[2] See the interesting Meditation xvi. on "Synthetic Necessaries".
[3] *Cf. Syn.*, i., 181. [4] *Ibid.*, i., 166, 167. [5] *Syn.*, i., 166.

processes of knowledge, which makes his theory so important and valuable. He is thereby able to explain in a most suggestive manner the force and validity for our experience of the fundamental categories on which all systematic knowledge rests. For in the very nature and constitution of will-reason there lie the conceptions of end, causality and ground. These are involved in the essence of will-reason, and at best are neither more nor less than aspects of it. To separate them is impossible, though in specific cases of knowledge we may confine attention to one rather than to another. At one stroke, therefore, the objective validity of the causal notion of physical science, and of the teleological notion of life and spirit are established, and the apparent opposition between them, so often looked on as leading knowledge to an *impasse*, is resolved into a distinction of elements in a single principle. The problem of 'free-will' disappears.[1]

In a sense Prof. Laurie's view of the 'will-reason' very much resembles Spinoza's 'conatus' with this difference, that while to Spinoza insistence on ends alone means ignorance of causes, to Prof. Laurie insistence on causes alone means ignorance of ends. To both the human individual is endowed with a potency of activity from the first, and realises that to the utmost of his capacity and in various forms and functions.

The same is true of the problem of identity and time, an important problem for any philosophical theory. The dialectic process being the process of absolute Reality is necessarily a time order;[2] but this does not destroy identity but makes its contents explicit in a certain order. Identity is in fact also involved in will-reason. The question of identity and time therefore resolves itself into one of degree of maintenance of unity through difference.[3]

In short, as Prof. Laurie shows in one of the subtlest meditations in the book (Med. xvii.), all oppositions in experience resolve themselves into oppositions of contrary elements within the one activity of the dialectic process. They never give rise to contradictions unless when the contrariety is checked in its process of resolution, and kept fixed without reference to the underlying unity. Contradiction is therefore not the product of reason as Kant said, but of understanding,[4] which is will-reason held up midway in its career to self-fulfilment. This is true not merely of one kind of contradiction but of all contradictions. Reason does certainly proceed by and through contrariety, but is never stopped by contradictions. Its business is to resolve them.

It will be seen from the foregoing brief analysis of Prof.

[1] *Cf. Syn.*, i., 296-297.
[2] *Syn.*, i., 295.
[3] *Ibid.*, i., 289.
[4] *Ibid.*, i., 174.

Laurie's argument, that it has so far been confined directly to the sphere of finitude and only indirectly refers to absolute Reality. Not that the finite and infinite are discrete facts: they are continuous.[1] But they are different, and man's knowledge never gets beyond finitude. He, like all other individuals, is limited to his stage or plane of being.[2] His greatness even lies in his limitations.[3] But, if so, how on such a view can we or do we get any apprehension of absolute Reality? Is our knowledge ever completed and perfect?

This brings in the question of relativity, and of our knowledge of infinity, which prepares the way for the problem of the nature of the Absolute. The consideration of these we shall reserve for another article.

[1] *Syn.*, i., 141, 177. [2] *Ibid.*, i., 315-316. [3] *Ibid.*, i., 86, 103.

# III.—STUDIES IN THE HISTORY OF BRITISH PSYCHOLOGY.

By T. Loveday.

## I.—An Early Criticism of Hobbes.

In 1663 William Lucy, Bishop of St. David's, published a small quarto volume, entitled *Observations, Censures and Confutations of Notorious Errours in Mr. Hobbes his* Leviathan *and other his Bookes. To which are annexed Occasional Animadversations on some writings of the Socinians, and such Hæreticks; of the same opinions with him.* The greater part of the book is a reissue, with certain modifications, of two tracts which he had already published separately under the pseudonym of William Pike, and which had dealt respectively with the first and second and with the twelfth to fourteenth chapters of the *Leviathan*.[1] A sufficient account of Lucy's life will be found in the *Dictionary of National Biography*. He appears to have been more fervent than prudent, somewhat pugnacious, of no very remarkable intellectual ability, but a sturdy upholder of rights and tradition. These characters are evident in his

[1] The bibliography of Lucy is confused. The tract on the two first chapters of the *Leviathan* is dated 1650, evidently a mistake, as the *Leviathan* did not appear till 1651. In the British Museum catalogue two copies are mentioned, one having its date altered in ink to 1656 and the other to 1658; I imagine that 1656 is the correct date. This tract is not mentioned in the *Dictionary of National Biography*. The second tract appeared in 1657, and was, like its predecessor, in 12mo. I have seen only the quarto of 1663. Mr. C. C. J. Webb, who has kindly looked up the Bodleian copies of the tract of 1657 and the quarto, tells me that there are certain differences between them where they cover the same ground, but not of an important nature. The quarto, however, deals with two additional chapters of the *Leviathan*. In the bibliographical volume of Baldwin's *Dictionary* Pike and Lucy both appear (*s.v.* Hobbes), as if they were different persons. The pseudonym is evidently, as Anthony à Wood points out, a play upon his name or arms, and was probably adopted to conceal his identity before the restoration, as a means of defence, for Wood tells us that he suffered considerably for his loyalty. Wood wrongly states the pseudonym as Theophilus Pyke: it was William Pike, Christophilus.

attack on Hobbes. The intrinsic value of his book is slight. It is a slovenly piece of writing. He takes the first, second and twelfth to sixteenth chapters of the *Leviathan*, with some passages from the *Human Nature* and the *De Corpore*, dissects and confutes them sentence by sentence, but wastes time over minutiæ and fails to give any coherent sketch either of the doctrines he opposes or of his own objections to them. Hobbes, of course, loved to pose, and for all its excellencies his language is full of exaggerations and inconsequences which Lucy gleefully hunts down with a syllogistic Tally-ho. The real interest of Lucy lies in his date. The philosophers of the seventeenth century whom every one reads, and even most of those, such as Herbert of Cherbury, whom every one only talks about, have in one way or another tried to cut adrift from the tradition of the schools. But, as is well known, the schools retained their tradition, and Lucy shows us more clearly, perhaps, than any other writer how the schools felt towards the new psychology of Hobbes. Lucy was three years at Oxford, where he graduated B.A. in 1613, some five years after Hobbes, and later he spent four years at Cambridge. Scholasticism reigned at both Universities,[1] and his philosophy was learned once for all. Fifty years later it remained almost untouched by the advance of contemporary thought. In theology we learn that he leaned to Arminianism, but Descartes did not exist for him, and if he knew any of the work of the earlier Cambridge Platonists, their influence upon him was slight. There is a kind of historical propriety in the fact that the first attack upon Hobbes's psychology represented the school of contemporary philosophy which Hobbes most despised.

Lucy's main purpose is theological: he wishes "to chase the wild Bore" out of the ecclesiastical vineyard "into his former Forest of heathenish principles". But perceiving that the two first chapters of the *Leviathan* are the intro-

[1] The general fact is of course well known. Two books which give a good idea of the state of University education in the first part of the seventeenth century are John Prideaux's *Hypomnemata Logica*, etc., an introduction to philosophy and to the sciences (except mathematics) designed for young students and published at Oxford, probably about 1620, and Stier's *Præcepta Doctrinæ Logicæ*, etc., republished at Cambridge in 1647. It is no doubt true that there had been a reaction against tradition in both Universities and especially at Cambridge, as *e.g.* Freudenthal has shown; but it may be questioned whether the average teaching was much affected thereby. Henry More, however, in his autobiographical sketch gives a curious list of authors studied: on going to Cambridge (1631) he read Aristotle, Cardan, Julius Scaliger, "and other philosophers of the greatest note," but it was not till he had graduated that he studied the "Platonick Writers".

duction and foundation of Hobbes's divinity, he properly begins by examining them. The really remarkable point about Hobbes when he speaks of the soul is not his materialistic phraseology, but his indifference. He is almost as soul-shy as an orthodox Buddhist. True, he begins the *Human Nature* with speech of "faculties and powers of the mind" (ch. i., §§ 5, 7), but his interest lies in concrete processes, not in powers. This comes out most clearly in his definitions. "When the action [of a thing] is present, the conception it produceth is called Sense" (*ib.*, i., § 2. *Cf. Lev.*, i., where sense is made to "consist in" sensations): Imagination is "conception remaining, and by little and little decaying from and after the act of sense" (*H. N.*, iii., § 1): and "Imagery and representations of the qualities of things without us is that we call our cognition, imagination, ideas, notice, conception or knowledge". With the "faculty or power by which we are capable of such knowledge" Hobbes makes but little play, and it is because he thus goes straight to the sequences of actual processes that he is rightly esteemed the father of British psychology. But this psychological attitude, whatever we may think of it to-day, must have been startling at the time. Lucy is evidently puzzled by it. He sees its novelty, and says of Hobbes in one place that "his opinions do confute that saying, *Nihil dictum quod non fuit dictum prius*"; but it appears to him a senseless position, equally an eccentricity with disrespect of Universities. Yet his reply is not without point. Hobbes's fundamental mistake is to suppose that all our thoughts are merely representations or appearances of some external object (*Lev.*, i.). He does not attempt to prove his statement, the falsity of which is clear if one considers that "when a man sleeps, or indeed is attent upon other business waking, although both visible and audible objects are presented to him, yet he thinks not of them nor discerns them". If you say that this is for lack of attention, you concede the point at issue, "for then thought is not only a representation, but something more, a conception of that man, which is an act of the soul". Lucy grants that the origin of all thought is in sense, and that in all thought there is something appearing, but "thought is not that apparition, but the apprehension of that appearance, and some way or other some judgment of it". It is interesting to notice how Lucy at once points upon attention, which has always been the most vulnerable spot in empirical psychology.

Similarly with the definition of sense in particular, as

"seeming or fancy," which "consisteth in light or colour," etc. "This seeming, to whom doth it seem?" asks Lucy. "That which seems, seems to somewhat," and sense is, not the seeming, but the act of apprehending it.

On perception Hobbes has little to say. Lucy, however, in trying to rebut the attack on sensible species, draws a fairly clear distinction between perceiving and "sensing,"[1] the former involving a reference to an object which is the work of reason; although in another place, when refuting Hobbes's charge against the schools that they made sense the *receipt* of sensible species, he speaks of all sense as involving judgment. He attacks Hobbes's doctrine that imagination is only decaying sense, and decaying not by weakening of the "motion" of sense but by its obscuration; for, he argues: (i.) sense, decaying or not, implies a present object; and (ii.) less verbally, imagination is not necessarily continuous with previous sensation, but sensation ceases entirely after the stimulus has been withdrawn, or, as he puts it, "those species lie lockt up in the memory, and there is no act of sensation concerning them, no not a decayed one". Were Hobbes's doctrine true, the consequence he draws would certainly follow, that imagination must grow constantly weaker with lapse of time; but Lucy, fortifying himself with a passage from the elder Seneca, maintains that though this is often so, yet in old age the events of childhood are more vividly recalled than recent experiences. The objections which follow against the identification of imagination and memory are poorly put, depending wholly on a conception of the one as an active power and the other as a passive receptacle.

Such is the better side of Lucy's polemic, and one may add a few detached remarks which seem to show that he was not altogether devoid of psychological observation and acumen. Hobbes had said in his haste, "Our heat is pleasure or pain, according as it is extreme or moderate" (*H. N.*, ii., § 9), and Lucy remarks that so far from being pleasure or pain heat is only their remote cause, for it causes sense and they result from sense; thus indeed confusing physical and psychical heat, but at the same time anticipating the distinction between feelings and sensations which did not become a commonplace of psychology until comparatively recent times. He has also a couple of autobiographical observations on dreams that are, perhaps, worth

[1] It is curious to note that Lucy actually uses this ugly word on p. 37: "The act of sensing (pardon that word sensing, it is unusual, yet significant)".

recording. Hobbes considered dreams to be due to visceral disturbance, whether originated by previous brain-processes (thoughts, imaginations, etc.) or directly by processes of digestion and the like, and he had used the argument that "old men commonly dream oftener, and have their dreams more painful than young". Lucy maintains that dreams may be due directly to the intellectual activities of the waking state, and recalls that the first Latin verses which he wrote were made in his sleep—"my thoughts having run upon nothing else in the day, busied themselves about them in the night"—and as to old age, he reports that he does not find it so, "because I think my thoughts are more composed, and by practice have made my passions less violent, and trouble myself with less eagerness of business". Again, at the beginning of the book, he speaks with not unjustified scorn of the vagueness of a physiology which was prepared to regard the heart as almost equally with the brain the seat of conscious processes, and ridicules the eccentric doctrine that the outward reference of sensations is due to a rebound of the stimulating motion from the central organ.

But these sounder parts occupy only a small proportion of Lucy's diffuse pages. He devotes in all about eighty pages to psychology, and fully half of them are concerned with a refutation of the doctrine of subjectivity of sensations based mainly on the theory of sensible species. He does not say much in defence of this theory, and what he does say is nothing new. Nor does he in any way connect the doctrine of subjectivity with the moral and religious errors of the *Leviathan*, nor his refutation of it with his defence of morality and Christianity. The argument itself is long and clumsy, and of no special interest, and I will merely give a short digest of it. Hobbes's positions, it will be remembered, were that (i.) colour and image do not inhere in the thing seen or (ii.) exist externally to us at all, but (iii.) are an apparition to us of the motion which the object works in the brain; and (iv.) that similarly other sensations or sense-qualities inhere in the subject only. In support of the first and second propositions he adduced reflected light and double vision; in support of the third, the appearance of light on inadequate stimulation by a blow, from which he argued that adequate stimulation also must consist in propagation of motion to the sense-organ and thence to the brain, a view which he brought into connexion with a physical doctrine that fire (and therefore also the sun) "worketh by motion equally every way," this motion being alternate dilatation and contraction and resulting in appearance of

light if coming direct or by reflexion from smooth surfaces, and in appearance of colour if reflected from rough surfaces. The subjectivity of sounds is evidenced by the multiplication of echoes, and that of tastes and smells by their differences to different individuals (*H. N.*, ii.). Lucy begins by distinguishing between colour and image. Colour is in the object; the image is conveyed to our brain and is therefore in us. Granted this, it is easy enough to argue that reflexion and double vision concern the image only; but Lucy's only proof that "Colour is a real thing in the object" runs, "That which produceth reall effects, is a reall thing: but colour in the object produceth reall effects: therefore," etc.,—a curious argument from one who prides himself on syllogistic facility. Nor does he explain his conception of Object. In this, as in most of the controversies against and around Hobbes, one is bewildered by the dogmatism of both sides; but, except in mathematics, Hobbes usually had the advantage over his opponents in coherency; and in the psychology of cognition, however faulty his views may be, his observation was generally more acute because less trammelled by tradition, though in his treatment of the passions, on the other hand, he invented new blinkers to impede his own vision.

As to sight ensuing upon inadequate stimulation, Lucy maintains that seeing stars after a blow is due, not to stimulation of the optic nerve at all, but to disturbance of the crystalline humour, or more probably the "white" humour: "as I have seen a very white cat in the dark, or a very white napkin, firm and stiff, struck in the dark, send out visible sparks, like those of fire, being, as I think, nothing but strong emission of species". His attack on Hobbes's physics of light and combustion is not worth recording, but he comes to a more important point in the conclusion that colour and image are but apparitions of motions in the brain. There is *primâ facie* a contradiction between this and the statement in the *Leviathan* according to which all our thoughts are appearances of qualities or accidents of external bodies. Had Lucy, as one would have expected of him, dwelled on this inconsistency, he would perhaps have seen not merely that it is due to an ambiguous use of "appear," but that whilst the mode of statement in the *Human Nature* is rather faulty, it yet embodies a clearer conception than the more plausible language of the *Leviathan*. In the one case Hobbes means very much what the modern upholders of epiphenomenal mentality meant a few years ago, and his plight is no worse than theirs: but as soon

as appearance is identified with representation of external qualities, his words cease to have any real meaning, because his failure to criticise the conception of body has left the conception of accident unintelligible. However, Lucy does not pursue the subject further than to reiterate that images are appearances of objects and not of internal motions, and to renew his attack on the idea that objectivity is due to a physiological "rebound".

He then passes on to Hobbes's fourth proposition, and it looks for a moment as if he would penetrate nearer to the heart of the subject. When you hear a bell ringing, says Hobbes, bell, clapper, air, ear, brain, all have motion and not sound; but the motion rebounding from the brain becomes "an apparition without, which we call sound". But, asks Lucy, how does this happen? On Hobbes's own showing a few lines before "nothing can make anything, which it is not in itself";[1] therefore the motion, if it had not sound before, cannot make sound. He does not go further into the matter, however, and perhaps it was not worth while. For so long as both opponents agreed in neglecting the primal difference between the physical and the psychical processes of light, heat, sound and the rest, so long their positions were without any common ground to serve as a basis for argument. The one held that a sound comes as sound to the sensorium and is then discerned by the soul. The other, though baffled by language, wished, despite one famous passage, to regard the "apparition of sound" as a motion among other motions.[2] In such a quandary as this one understands the force of More's appeal to the Universities to encourage the study of Descartes (*The Immortality of the Soul*, preface, § 15).

Lucy does not examine those parts of the *Leviathan* which deal with the psychology of the passions and will. He has a few paragraphs on appetite, but they are concerned with Hobbes's jeer at the ascription of appetite to inanimate things (*Lev.*, ii.), and consist in an attack on Hobbes's statement of inertia and in an attempt to resuscitate the notion of natural appetite, as distinct from but parallel to human appetite. He draws no distinction between the tendency of a stone to

[1] According to Tönnies's edition of the *Elements of Law* the MS. reading is, "nothing can make anything itself," but Lucy of course quotes from the printed text.

[2] It seems pretty evident that Hobbes recognised the distinction more clearly than he was willing to allow, but found it inconvenient and burked it. He was not an ingenuous writer. Commentators are apt to forget that even philosophers have human frailties, and that too even when philosophising.

fall downwards and the instinctive and lower impulsive appetites of animals and men. As to the will, Lucy affected Arminianism, and therefore maintains the freedom of the will, but he offers no psychology of the will.

It is beside my purpose to deal with questions of religion or ethics, but as Lucy hardly deserves two articles from any one, I will briefly indicate the nature of his comments on Hobbist morals. They are rendered a little wearisome by his constant appeals to Old Testament history, which seems to have been the only history he knew and is of course accepted by him without a trace of criticism; but on the whole they are sane. Hobbes has been chiefly famous for his ethical and political theories, which are really among the weakest parts of his work and deserve little more consideration than his mathematics. Unprejudiced observation of human nature at once destroys their plausibility, and on the facts of human nature Lucy bases his attack. "To use the phrase of the time," he says, "this Gent. is very *selfish*." Hobbes's entire view of natural man is mistaken. "Men are reasonable creatures, and sociable." The state of universal war is a figment. Hobbes argues from equality of ability to equality of ambition, and thence to hostility. But he is imagining a world of unrelated adults, and Lucy points out with justice that the weakness of children and the affection of parents for their children are plain facts which make nonsense of this wonderful theory. Nor is it true to facts to say that every man esteems his life beyond all other goods: men have willingly surrendered their lives *pro aris et focis*. To say that no passions are sins till there is a law that forbids is, as Hobbes means the statement, to forget that "every man is born a Citizen of the world," subject to divine law as apprehended by conscience,—for Lucy takes religion to be an innate principle; and even apart from that, the distinction of 'meum' and 'tuum' as resting on Occupancy or prior possession is imposed by a law of nature which is before positive law. Thus Lucy in effect anticipates many of the criticisms which during the next half century were elaborated by men better remembered than he.

I will conclude this sketch of his views by quoting a passage in a higher vein, which, though not particularly original, connects him with a school of thought to which he does not in general belong. "That which makes a man happy, and satisfies his Soule, must be something in him, by which he excells beasts, that must be his Reason, and reasonable Will; this Will is not satisfied but by knowledge; no satisfaction of it, but the enjoying that it loves; no love without

knowledge. . . . Knowledge is of Truth, God is the fountaine of all Truth, from whence it came, yea Truth itself; and therefore that Understanding, which is carried to Truth, cannot be at rest untill it come to know him againe; God is infinite, nothing can fill the understanding but what is infinite. . . . What I say for the Understanding, I say likewise for the Will; what is lesse than infinite cannot satisfy it."

## IV.—PLATO'S VISION OF THE IDEAS.

By W. Temple.

The first point to strike one about Plato's writings as a whole is the unique combination of artistic and philosophic gifts—unique at any rate previous to Goethe. And it seems incredible that the perfect art of Plato's work should be a mere matter of expression. The supreme artist is not a man who says in some catchy phrase what we all think and feel; he is first and foremost a man whose experience is richer and fuller than that of others. It is narrated of a certain American that at an advanced age he had the singular good fortune to pick up a Shakespeare; after reading two or three plays he said—"Now that's a most remarkable book; I reckon there aren't a dozen men in Boston that could have written that book". The incapacity of the Boston gentlemen is probably not only a matter of comparatively limited command of language; the whole state of mind in which a man sits down to write King Lear or the Ninth Symphony must remain to most of us a thing totally unknown. But Plato's art is comparable to that of the greatest masters, and in this fact we have, I believe, the explanation of his myths and the partial explanation of his Ideal Theory.

Prof. Stewart, in his delightful book on *The Myths of Plato*, suggests, if I understand him right, that Plato had a clear conception of the limits of human science, and indulged in myth when he found it necessary to overstep those limits; it is not contended that he anticipated the Kantian argument, but that he grasped by direct insight the Kantian conclusion. I cannot assent to this; for it involves placing the Idea of Good in the sphere of myth, as distinct from that of science, which is contrary, not only to single expressions such as *μέγιστον μάθημα*, but also to the whole feeling of the passage in the *Republic* where the science of Dialectic is described. I think Plato did not count himself to have apprehended the Idea of Good, but he regarded its existence as scientifically established. Rather it seems to be true that his logical inquiries and his artistic intuitions acted

upon each other; that in most arguments we have logic alone; that in the myths we have intuition alone; but that in the Ideal Theory we have the product of their interaction. I am most grateful to Prof. Stewart for his distinction between Plato's myths and allegory; the myths are direct expressions of artistic experience—as is the symphony or the picture; and in the experience, let us say, of the myth of Er we have the artistic apprehension of matter whose logical apprehension is given in the main body of the *Republic*. But our subject is sufficiently large without the addition of the whole problem of the Myths. In the Ideal Theory we have a doctrine to which I believe that logic and intuition have both contributed.

In order to show the process by which I believe that the Theory in its full form arose, it is necessary to go over a great deal of quite familiar ground. Nearly every statement one can make is controversial, but as the arguments for and against in each case have been bandied about so long, I shall not pause to justify every step I take. For the chronological order of the Dialogues I follow Lutoslawski.

We begin with the well-known remark of Aristotle in *Metaph.*, *a* 6, that Plato's philosophy was a product of the interaction of the Heraclitean physics that he had learnt from Cratylus, and the search for true universals in ethics which he inherited from Socrates. *ἐκ νέου τε γὰρ συνήθης γενόμενος πρῶτον Κρατύλῳ καὶ ταῖς Ἡρακλειτείοις δόξαις, ὡς ἁπάντων τῶν αἰσθητῶν ἀεὶ ῥεόντων καὶ ἐπιστήμης περὶ αὐτῶν οὐκ οὔσης, ταῦτα μὲν καὶ ὕστερον οὕτως ὑπέλαβεν· Σωκράτους δὲ περὶ μὲν τὰ ἠθικὰ πραγματευομένου, περὶ δὲ τῆς ὅλης φύσεως οὐδέν, ἐν μέντοι τούτοις τὸ καθόλου ζητοῦντος καὶ περὶ ὁρισμῶν ἐπιστήσαντος πρώτου τὴν διάνοιαν, ἐκεῖνον ἀποδεξάμενος διὰ τὸ τοιοῦτον ὑπέλαβεν ὡς περὶ ἑτέρων τοῦτο γινόμενον καὶ οὐ τῶν αἰσθητῶν· ἀδύνατον γὰρ εἶναι τὸν κοινὸν ὅρον τῶν αἰσθητῶν τινός, ἀεί γε μεταβάλλοντων* (987 *a* 32-987 *b* 7).

In the early dialogues Plato is entirely under the influence of Socrates; he has two aims—the portrayal of his master's character, and the illustration and application of his method. If the scepticism as to the truth of sense impressions has not yet appeared, it is because the metaphysical implications of his ethical inquiries have not yet attracted his attention. It is true that he nowhere mentions the Heraclitean philosophy, but it is equally true that he never has occasion to do so. In the *Protagoras* we find the first signs of dissatisfaction with the teaching of Socrates, and in its continuation, the *Meno*, we find Plato for the first time directing his attention specifically to the problem of knowledge; it is characteristic

that this problem is only introduced because on its solution depends the answer to the ethical question which is the main subject of the dialogue. Here emerges, of course, the distinction of knowledge from true opinion, and Plato, while admitting that Themistocles, Pericles and the rest were real statesmen, attributes their success to opinion. In the *Gorgias*, which adds little that concerns our present purpose, we find Socrates, as Plato's spokesman, declaring that these celebrated politicians were not statesmen at all—they filled the city, not with justice and temperance, but with harbours, tributes, and similar rubbish. Plato himself is the only true statesman, for he alone derives his political doctrines from knowledge of the good. In the *Meno* opinion is expressly stated to be as good as knowledge for practical purposes, so long as it is retained; but it is unstable, and knowledge differs from it only in being made fast by calculation of the cause—a view directly attacked in the *Theætetus* and at least changed beyond all recognition in the great dialogues of the Ideal period.

In the *Cratylus* we find Plato for the first time directly interested in the problem to which the Ideal Theory offers a solution—and it can be no mere coincidence that this dialogue represents Socrates, from whom Plato learnt to search for definitions, as pitted against Cratylus, from whom he had learnt to believe in the unceasing flux of all material objects. All through the dialogue we are approaching the Ideal Theory, but though it often seems the only possible conclusion of the argument, it never appears in its full form. At 386 *e* it is urged that if we reject the doctrine of Protagoras—*τὸ οἷα ἂν δοκῇ ἑκάστῳ, τοιαῦτα καὶ εἶναι*—and that of Euthydemus—*πᾶσι πάντα ὁμοίως εἶναι ἅμα καὶ ἀεί*—we are driven to believe in objective truth. At 389 *b* we find that the carpenter makes a shuttle, with his attention fixed on the *εἶδος*, and this *εἶδος*—*δικαιότατ' ἂν αὐτὸ ὃ ἔστιν κερκὶς καλέσαιμεν*. But this *εἶδος* is determined teleologically and there is no further hint of it as a metaphysical reality. It is not till the end of the dialogue that any such notion is introduced; at 439 *b* Socrates says that the true method of learning or discovering is more than he and Cratylus are likely to find out, but they may agree that it is *οὐκ ἐξ ὀνομάτων, ἀλλὰ πολὺ μᾶλλον αὐτὰ ἐξ αὑτῶν*. And then Cratylus is invited to consider a notion that has often occurred to Socrates—*ὃ πολλάκις ὀνειρώττω πότερον φῶμέν τι εἶναι αὐτὸ καλὸν καὶ ἀγαθὸν καὶ ἓν ἕκαστον τῶν ὄντων οὕτω* (439 *c*). It is then pointed out that on any other hypothesis knowledge is impossible, and Socrates and Cratylus urge each other to go on looking for the answer to this question.

*Ἴσως μὲν οὖν δὴ οὕτως ἔχει, ἴσως δὲ καὶ οὔ*—it is a long journey from this tentative and sceptical approach to the full and confident assertions of the *Symposium*. In the speech of Socrates in that dialogue a prophetess is introduced to reveal the mystery—thus Plato prepares us for a doctrine that is not only quite unsocratic, but has about it the dignity of a religious dogma. It is the prophetess who speaks, but the experience described is Plato's; it is impossible to read the closing paragraph of that speech without feeling that Plato is telling us of a means to a great experience which has come to himself. The language of initiation is freely used; the prophetess is afraid Socrates may not be able to follow *τὰ τέλεα καὶ ἐποπτικά*, in whose interest all other love exists. The process consists in a saturation of the soul with beauty,—first beauty in a single object, then beauty of form in all its manifestations, then beauty of character. (Here Socrates is urged specially to attend.) *ὃς γὰρ ἂν μέχρι ἐνταῦθα πρὸς τὰ ἐρωτικὰ παιδαγωγηθῇ, θεώμενος ἐφεξῆς τε καὶ ὀρθῶς τὰ καλά, πρὸς τέλος ἤδη ἴων τῶν ἐρωτικῶν, ἐξαίφνης κατόψεταί τι θαυμαστὸν τὴν φύσιν καλόν, τοῦτο ἐκεῖνο, ὦ Σώκρατες, οὗ δὴ ἕνεκεν καὶ οἱ ἔμπροσθεν πάντες πόνοι ἦσαν . . . αὐτὸ καθ' αὑτὸ μεθ' αὑτοῦ μονοειδὲς ἀεὶ ὄν.* This is a great deal more than the discovery of an affirmative answer to the question with which the *Cratylus* concluded; it is not a rhetorical way of saying that the existence of an *αὐτὸ καλὸν καὶ ἀγαθὸν καὶ ἓν ἕκαστον τῶν ὄντων* is now established. This is the language of rapture and ecstasy. *ἐξαίφνης κατόψεται*—the Idea of Beauty must have suddenly flashed upon Plato, and he believes that the vision may be won by others who set out to look for it in the same way. One other great artist at least had an almost identical experience—an experience whose interest is all the greater for us in this connexion because it appears to be a case of involuntary imitation, Plato himself being the model. In the *Hymn to Intellectual Beauty* Shelley describes an experience closely analogous to that which I believe Plato to have had between the dates of the *Cratylus* and the *Symposium* (*cf.* especially stanzas ii., iv., v., vi.).

The vision was the answer of Plato's imagination to the perplexity of his intellect. In the *Cratylus* we see him wondering whether it is possible to assert the objective reality of the subject-matter of science; his whole tendency is clearly towards an affirmative answer, and then in a moment of strong excitement or exaltation his imagination bodies forth before him the very Idea of Beauty. Doubt is now impossible; the logical tendency is confirmed by the imagina-

tive intuition, and the image beheld is endowed with the attributes suggested by the logical problem.

I submit that this is the obvious and only possible interpretation of Plato's words. It is quite essential to the coherence of the passage that the ultimate beauty should be perceptible in a manner analogous to that of perceiving particular beautiful objects; no doubt it is not supposed to be actually seen by the eyes, for it is immaterial, but it is directly perceived by the mind, which is sensitive to Ideas as the eye is sensitive to light. Once the vision has come, it is itself the proof of the reality of the Ideas. And this proof is not regarded by Plato as mythological, but as scientific. The vision is pointedly, and repeatedly called *μάθημα* (211 *c*). The problem of universals may be solved by any one who will take the trouble to see a universal; a particular training makes a man sensitive to the Ideas—and once he has seen one, his doubts and difficulties vanish. But not only is a logical problem solved; life itself becomes divine and eternal to the seer of the vision. If beauty in the human form can so move a man that he cares neither to eat nor drink, but only to gaze, what must we suppose to be the life of one who has beheld Beauty itself in its unsullied purity, unencumbered by flesh and colour and the trappings of mortality? Such a man will bring forth true virtue and win the love of God and immortality (211 *c* - 212 *a*).

I propose now to trace very briefly the subsequent history of the theory; then to inquire whether it is possible to determine at all closely the nature of the vision and the circumstances in which it was experienced; and lastly to suggest some particular points in which this view of the origin of the Ideal Theory solves the logical difficulties of the Theory.

The supposed fact discovered in the vision of Ideal Beauty was immediately accepted by Plato as the solution of his problem. In the *Phædo*[1] all general terms are substantiated, and a whole realm of Ideas is set up. Nowhere except in the tenth book of the *Republic* is the utter disparateness of Ideas and particulars so strongly insisted on as here. I cannot, however, accept the theory that the

[1] If we hold that the *Phædo* is earlier than the *Symposium* we must also hold that Plato arrived at the Ideal Theory on its philosophical side before the first occurrence of the vision. This in no way militates against the main point that I am urging, for I do not at all wish to deny that the Ideal Theory is a philosophy and requires philosophical discussion; my point is that the Theory is *also* a religion with a basis of ecstatic vision; and it seems to me more natural that the vision, with all the apparatus of the prophetess, etc., in its exposition, should come first and the elaborated philosophy afterwards.

*Symposium* and the *Phædo* are complementary in this respect —the *Phædo* insisting on disparateness, and the *Symposium* on the continuity of process from one to the other (Caird, *Evolution of Theology in the Greek Philosophers*, vol. i., p. 112): for the vision in the *Symposium* is a sudden revelation *ab extra*—ἐξαίφνης κατόψεται—and the previous process is only a preparation of the soul making it fit to receive the vision. The Ideas are real external facts, which may be perceived by Reason as by another sense. The relation of a particular to its Idea in the *Symposium* is μέθεξις (211 *b*)—and that of such a kind as to leave the substance unaltered. In the *Phædo* the same term recurs (100 *c*), with the addition that it is not to be regarded as a precise term. "If any one tells me that an object is beautiful, . . . I leave all other questions, for I am far from clear about them, but I am convinced simply, literally and perhaps naïvely of this, that nothing makes it beautiful except ἡ ἐκείνου τοῦ καλοῦ εἴτε παρουσία εἴτε κοινωνία ὅπῃ δὴ καὶ ὅπως προσγενομένη. οὐ γὰρ ἔτι τοῦτο διϊσχυρίζομαι, ἀλλ' ὅτι τῷ καλῷ πάντα τὰ καλὰ γίγνεται καλά (100 *d*). All these expressions are no doubt metaphors, but the relation must have been conceived in such a way as to suggest these metaphors rather than others. And we have to remember that in *Republic*, X., the metaphor used is μίμησις, which still more emphasises the separateness of the Ideas. In the *Phædo* we learn definitely that we cannot altogether apprehend the Ideas while we are still in the body; but in the pre-natal state we did, and after death we shall again, apprehend them perfectly. The completely ordered teleological system of the Ideas, insisted on in the *Republic*, is suggested in the passage where Socrates expresses his disappointment in Anaxagoras (97 *c*). Plato characteristically takes the strongest instance he can think of; a true scientific method, he says, would settle the question whether the earth is round or flat by showing which it is better that it should be (97 *e*). He adds that he has found no teacher of this method, and has had to fall back on a δεύτερος πλοῦς (99 *d*), namely the method of hypotheses, one being suggested after another until at last one is found to cover all the facts, ἕως ἐπί τι ἱκανόν ἔλθοις. I see no trace of irony anywhere in this passage. It shows us Plato as he developed his conception of the Ideal world into the full system centred in the Idea of Good which appears in the *Republic*. The supremacy of the Idea of Good is the metaphysical counterpart of the teleological theory of science presented in the *Phædo*.

When Plato had discovered in the *Meno* the distinction between Knowledge and True Opinion, he immediately ap-

plied it to practical questions in the *Gorgias*; so now, having discovered the Ideas, he at once passes to the political importance of his discovery—in the *Republic*.

It is to be noticed that there is very little real argument produced in support of the Ideal Theory in either the *Phædo* or the *Republic*: in the former it is accepted at once without argument, and in the latter it is accepted by Glauco; and Antisthenes, or whoever else the imaginary opponent may be (476 *d*), is rather ridiculed than confuted. The Ideal Theory is already treated as an accepted dogma of the Platonic school; the master had seen the vision and the disciples believed in the doctrine he had drawn from it.

In the central books of the *Republic* there is a great deal of rapturous language about the Ideas, which reminds us of the *Symposium* (*cf.* 486 *a*, *θεωρία πάντος μὲν χρόνου, πάσης δὲ οὐσίας*: 490 *b*, *ὁ ὄντως φιλομαθὴς . . . οὐκ ἐπιμένοι ἐπὶ τοῖς δοξαζομένοις εἶναι πολλοῖς ἑκάστοις, ἀλλ' ἴοι καὶ οὐκ ἀμβλύνοιτο οὐδ' ἀπολήγοι τοῦ ἔρωτος, πρὶν αὐτοῦ ὃ ἔστιν ἑκάστου τῆς φύσεως ἅψασθαι ᾧ προσήκει ψυχῆς ἐφάπτεσθαι· προσήκει δὲ ξυγγενεῖ· ᾧ πλησιάσας καὶ μιγεὶς τῷ ὄντι ὄντως, γεννήσας νοῦν καὶ ἀλήθειαν, γνοίη τε καὶ ἀληθῶς ζῴη καὶ τρέφοιτο καὶ οὕτω λήγοι ὠδῖνος, πρὶν δ' οὔ*). These books do not materially advance the solution of the question left open in the *Phædo* as to the relation of Ideas and particulars, nor is the substantiation of purely relative notions in the passage dealing with the propædeutic studies anything more than an elaboration of what is already implied in the *Phædo*, where *μέγεθος* is included among the Ideas; but the systematisation of the Ideal realm itself is carried far further, and the aspirations towards a complete teleology, expressed in the *Phædo*, find their realisation in the supremacy of the Idea of Good, as the source of both subjective and objective existence. Whether or not Plato here *confuses* truth and value is a question that touches the Ideal Theory on its logical side; he certainly identifies them, and that without advancing any arguments to justify him in so doing.

So far Plato has confined his attention to such general terms as are usually expressed by adjectives, except where language happens to supply a noun, such as *μέγεθος* or *ἴσχυς* (*Phædo*, 65 *d*), for some adjectival notion. It is true that in the *Cratylus* we heard of the *εἶδος* which *δικαιότατ' ἂν αὐτὸ ὃ ἔστιν κερκὶς καλέσαιμεν*: 389 *b*; but it was not there suggested that there existed in heaven or elsewhere a perfect shuttle; the *εἶδος* there is in fact determined by the purpose of a shuttle. But in *Republic*, X., we are presented with the real bed in heaven, which God made, and which the car-

penter imitates as well as he can. No doubt the language here is peculiarly crude, and the appearance of God as the Maker of the Ideas suggests that the whole passage is mythological. But for all this the doctrine of the passage is the necessary development of what precedes. "Bed" is just as much a general term as "Big" or "Beautiful," and if the argument is to apply to one such term it must apply to all. In fact *Republic*, X., 595 *a*-597 *e*, is a passage of quite crucial importance in the development of Plato's philosophy, and it is by no means to be dismissed as an excrescence; for there appear here two considerations which are subsequently to prove fatal to the earlier ideal theory with its basis of ecstatic vision—namely the application of the theory to all general terms, and the τρίτος ἄνθρωπος argument.

Let us take the second first. Here, in *Republic*, X., the argument is introduced to prove that each Idea is single; for if there were two, they would not be the real Idea, but this would appear above or behind them as the principle of their unity; *e.g.*, if we suppose two ideal beds, we shall have to suppose another which determines each as an ideal bed—and this will be the real Idea (597 *c*). In the *Parmenides* this same argument is applied with ruinous effect to the Ideal Theory itself (132 *a*); for a third Idea is wanted to connect the Idea with its particulars, and so *ad infinitum*.

The same fate awaits the extension, made in *Republic*, X., of the Ideal Theory to general nouns; he asserts fearlessly the existence of the Ideal Bed, but this too leads to absurdities. In the *Parmenides*, at 130 *c*, Socrates confesses to a perplexity whether there are Ideas of Man, Fire, Water, and so on, and himself urges that to maintain the existence of Ideal Hair or Ideal Mud would be to fall into an abyss of absurdity. It is true that Parmenides replies by assuring Socrates that it is only his youth which makes him despise these things, but the passage is significant, and occurs in the middle of an elaborate attack on the ideal theory.[1] My point at present is that two of the charges contained in that attack are further developments of what is first introduced in *Republic*, X.

It will be apparent that I regard the *Parmenides* as a direct attack on the earlier Platonic theory; this is shown to be the intention by the fact that Socrates is the representative and champion of the Ideal Theory, and is here defeated in

[1] It has been suggested to me that Plato hoped to get over the difficulty of (*e.g.*) Ideal Mud by his doctrine of the κοινωνία εἰδῶν: but this doctrine is used in the *Sophist*, if I understand Plato rightly, only to secure the possibility of certain kinds of predication.

the argument.[1] Socrates could not be himself the spokesman of the theory on its first appearance, for it was utterly foreign to the historic Socrates; so the prophetess of Mantinea was invented. But after the Socrates of the Dialogues had been himself initiated by the prophetess, he could quite consistently appear as the spokesman of the theory in the *Phædo*, the *Republic* and the *Phædrus*. As the spokesman of *an* Ideal Theory he appears in the *Parmenides;* surely it is legitimate to infer that the Ideal Theory here refuted—refuted by Parmenides and upheld by Socrates—is meant to be the same as the Theory with which by this time Socrates' name is so closely connected. And as a matter of fact it is precisely the theory which appears in *Republic*, X. If we like to adopt an interpretation of the earlier Ideal Theory which squares better with modern logic, though it involves totally ignoring the language of religious ecstasy, and also reduces the tenth book to a very crude popularisation—a popularisation introduced just when it is of vital importance to maintain the argument at the highest level—then we may regard the *Parmenides* as an attack on some theory that Plato had never held. But I cannot ignore that rapturous language; it proves that the Ideal Theory is not purely logical. And I cannot believe that so consummate an artist as Plato could possibly have introduced the crucial passage in Book X. unless he meant it every word: it is fitting that the emotional exaltation should be less in that passage, to prepare for the effect of the myth; but a deliberately weak piece of argument in that position is utterly inconceivable. Moreover, why in the world is it the invincible Socrates who takes charge of the discredited theory in the *Parmenides*, and thereby incurs defeat, unless to remind us that he had won victories with this very theory in previous dialogues?

The *Parmenides* shattered the old ideal theory.[2] In the

[1] It has been objected to this that on my hypothesis the Socrates of the Dialogues was only initiated in the *Symposium*, but is represented in the *Parmenides* as younger than he was at the date of that supposed initiation. I do not feel this objection very strongly; Socrates' name had become connected with the Ideal Theory by a literary convention, but he had to be represented as a young man to keep up the illusion of the conversation with Parmenides. In any case, however, there is a kind of anachronism, and no doubt opinions will differ as to which is the more probable.

[2] By "the old Ideal Theory" I mean the theory which is both a philosophy and an ecstatic religion. The vision implied independently existing Ideas, and this implication is shown in the *Parmenides* to be untenable. In that dialogue it is not the Ideas, but certain theories of the relation existing between Ideas and Particulars, that are attacked—*i.e.*, the theories suggested in the *Symposium* (*μέθεξις*), *Phædo* (*παρουσία—κοινωνία*

*Sophist* its upholders are treated as people with whom Plato had never had anything to do—people who *μάλα εὐλαβῶς ἄνωθεν ἐξ ἀοράτου ποθὲν ἀμύνονται, νοητὰ ἄττα καὶ ἀσώματα εἴδη βιαζόμενοι τὴν ἀληθινὴν οὐσίαν εἶναι* (246 *b*)—an exact description of his own previous procedure: and at 248 *c*, where he exclaims, "Can we ever be made to believe that motion and life and soul and mind are not present with perfect being? Can we imagine that being is devoid of life and mind and exists in awful unmeaningness an everlasting fixture?" we have the final repudiation of the Idea of Good as presented in the *Republic*. After this it is no surprise to find that in the *Philebus* the royal mind of Zeus takes the place of the Idea of Good as the central principle of the Universe. In the *Timæus* the Ideas reappear, but as mythical elements in a mythical fabric, and it seems at least possible to interpret them in this work as being the perfect thoughts of God. In these later dialogues the old ideal theory is not to be found. The vision had faded, and the logical objections were able to tell.

The vision had faded; and this will seem natural enough when we proceed to examine the nature of the vision itself and the circumstances of its occurrence. On the former point the *Symposium* gives no help, but the language is entirely in harmony with the other passage that is of chief importance for this subject—Socrates' second speech in the *Phædrus*.[1] Here all the images are those of brilliant, dazzling light. *κάλλος δὲ τότ' ἦν ἰδεῖν λαμπρόν* (250 *b*); *ὁλόκληρα δὲ καὶ ἁπλᾶ καὶ ἀτρεμῆ καὶ εὐδαίμονα φάσματα μυούμενοί τε καὶ ἐποπτεύοντες ἐν αὐγῇ καθαρᾷ* (250 *c*); *ἀστράπτουσαν* (254 *b*). The whole language in both dialogues is of vision, and these phrases suggest the nature of the vision. All is in perfect harmony with the *Symposium*: there was a dazzling brightness, too brilliant to have form or colour (*ἀχρώματός τε καὶ ἀσχημάτιστος*: *Phædrus*, 247 *c*). All this throws a new light on the passage in the *Republic* where the Idea of Good is compared to the sun, and where language about being dazzled is frequent. (*Cf.* especially 515 *c-e*: the vision of real objects gives pain at first to the Cave-dweller *διὰ τὰς μαρμαρυγὰς*:

is only another term for *μέθεξις*) and *Republic* (*μίμησις*, or, as it becomes in the less poetic *Parmenides*, *ὁμοίωσις*). This section of the Dialogue ends with the announcement that we must still believe in *εἴδη*, in spite of these difficulties, but the belief that remains, however much sounder philosophically, is emotionally impoverished.

[1] For my interpretation of the *Phædrus* I am largely indebted to Mr. W. A. Pickard Cambridge, of Magdalen College, Oxford, who pointed out to me how this dialogue harmonises with and supplements my interpretation of the *Symposium*.

and if one be dragged to the true light *ἆρα οὐχὶ ὀδυνᾶσθαί τε ἂν καὶ ἀγανακτεῖν ἑλκόμενον καὶ ἐπειδὴ πρὸς τὸ φῶς ἔλθοι, αὐγῆς ἂν ἔχοντα τὰ ὄμματα μεστὰ ὁρᾶν οὐδ' ἂν ἓν δύνασθαι τῶν νῦν λεγομένων ἀληθῶν.* First he will look only at shadows, then at reflexions in water, then at the real objects, and last of all at the sun itself.)

There is no need to point out the frequency of such experiences as I have attributed to Plato: the Shekinah in the Jewish Temple, the "excellent glory" at the Baptism and the cloud at the Transfiguration of Christ, the dazzling light at St. Paul's conversion—are familiar instances. Whatever their explanation may be, I should class Plato's experience with these.

And now we may inquire under what circumstances Plato beheld this vision. Here no doubt is possible; *ὅταν δή τις ἀπὸ τῶνδε διὰ τὸ ὀρθῶς παιδεραστεῖν*[1] *ἐπανιὼν ἐκεῖνο τὸ καλὸν ἄρχηται καθορᾶν, σχεδὸν ἄν τι ἅπτοιτο τοῦ τέλους* (*Symp.*, 211 *b*). It is no accident that both the dialogues where the ecstatic nature of the vision is insisted on are panegyrics upon Love; nor is it a mere insignificant detail that Glauco, the Lover, is always the interlocutor in the most Ideal passages in the *Republic*. The language of the *Symposium* is clear enough; but that of the *Phædrus* is unmistakable.

This is, after all, in accordance with all analogy. The mystic vision or the prophetic afflatus is induced by an excitement so violent as to paralyse the critical faculties, and almost, if not quite, to remove self-consciousness. Dervish dances are the stock instance, and we remember that men said "Is Saul also among the prophets?" because the King of Israel "stripped off his clothes and lay down naked all that day and all that night" (1 Samuel xix. 24). The excitement of *παιδεραστία* was to Plato quite sufficient to provide opportunity for trances (*cf. Phædrus*, 254 *c-e*, the struggle of the charioteer of the soul and the passionate steed: the latter *βιαζόμενος, χρεμετίζων, ἕλκων ἠνάγκασεν αὖ προσελθεῖν τοῖς παιδικοῖς . . . καὶ ἐπειδὴ ἐγγὺς ἦσαν, ἐγκύψας καὶ ἐκτείνας τὴν κέρκον, ἐνδακὼν τὸν χαλινόν μετ' ἀναιδείας ἕλκει· ὁ δὲ ἡνίοχος ἔτι μᾶλλον ταὐτὸ πάθος παθών, ὥσπερ ἀπὸ ὕσπληγος ἀναπεσών, ἔτι μᾶλλον τοῦ ὑβριστοῦ ἵππου ἐκ τῶν ὀδόντων βίᾳ ὀπίσω σπάσας τὸν χαλινόν, τήν τε κακήγορον γλῶτταν καὶ τὰς γνάθους καθήμαξεν καὶ τὰ σκέλη τε καὶ τὰ ἰσχία πρὸς τὴν γὴν ἐρείσας ὀδύναις ἔδωκεν*). Prof. Stewart devotes only a single page to this subject (*The Myths of Plato*,

[1] *Cf. Republic*, 490 *b*, already cited.

p. 336), and concludes with the remark: "The reflexion, in most cases a trite one, that even the best men are apt to become tolerant of the evil which prevails in the manners of their age, is hardly, in this case, a trite reflexion, for it is such an oppressively sad one". I do not know for what public Prof. Stewart was primarily writing, but for purposes of scientific exposition this seems to me a most inadequate treatment of an important subject. For in fact Plato is not only tolerant of *παιδεραστία*, but regards it as the means to the highest spiritual experience. What would for most men be the material of purely animal indulgence was for him the occasion of the beatific vision. That this may be so the sensual element must be suppressed (256 *a* and *b*), yet the presence of the sensual impulse appears from the whole passage to be necessary. It is quite incredible that this speech of Socrates should be other than the record of genuine experience.[1] The soul has seen the vision in its purity in the other world, before birth. The beautiful youth stirs up desire; but the other two elements in the soul resist—then yielding they approach and behold *τὴν ὄψιν τὴν τῶν παιδικῶν ἀστράπτουσαν* (254 *b*): that is not the language of mere sensual excitement; no intensity of feeling after that fashion could suggest such an expression—"his face did shine as the sun". Then memory of the prenatal vision revives—*καὶ πάλιν εἶδεν αὐτὴν μετὰ σωφροσύνης ἐν ἁγνῷ βάθρῳ βεβῶσαν*. The youth becomes for the philosophic lover an embodiment of the Ideal Beauty, and may be the object of a reverence bordering on worship; *ὁ δὲ ἀρτιτελής, ὁ τῶν τότε πολυθεάμων, ὅταν θεοειδὲς προσωπὸν ἴδῃ κάλλος εὖ μεμιμημένον ἢ τινα σώματος ἰδέαν, πρῶτον μὲν ἔφριξε καί τι τῶν τότε ὑπῆλθεν αὐτὸν δειμάτων, εἶτα προσορῶν ὡς θεὸν σέβεται, καὶ εἰ μὴ ἐδεδίει τὴν τῆς σφόδρα μανίας δόξαν, θύοι ἂν ὡς ἀγάλματι καὶ θεῷ τοῖς παιδικοῖς* (251 *a*). Plato is careful to avoid incurring the charge of advocating sensuality; the proofs of Socrates' perfect continence are given by Alcibiades in the *Symposium* as soon as Socrates himself has finished his description of the ecstasy of love; and in the *Phædrus* a sharp distinction is drawn between the supreme bliss of the lovers, who, after severe struggle indeed, restrain their impulses, and the vulgar enjoyment of the sensual (256 *a-d*).

It has often been remarked that Plato has one great prejudice—against Pleasure. This should now be easily intelligible. Platonic love, if it means "a sentimental passion

[1] The only way to establish this would be to quote the entire speech from 250 *c* to 256 *e*.

of a vegetable fashion," is a most outrageous fiction. Plato's was a temperament of storm and stress. In the quotation from Sophocles at the opening of the *Republic* (329 *c*), in the *Εὐφήμει* with which Socrates meets Glauco's half-suggestion that the Idea of Good is Pleasure (509 *a*), in the wonderful combination of playful irony and prophetic earnestness with which Callicles is annihilated in the *Gorgias*, we catch the voice of Plato's dread of pleasure. Yet it is in an experience for which duly controlled passion fits the soul that the vision is beheld. I do not think we ought to talk about tolerance of prevailing evils; for in any case it is hard to deny that the capacity for virtue and for vice is the same, and that the material of the lowest is also that of the highest. In these healthier times the marriage relation has taken the place of *παιδεραστία*, but Plato's position remains sound both in its optimism and in its warning—for there is "a way to Hell even from the Gates of Heaven, as well as from the City of Destruction". It is not *any παιδεραστία* that brings the vision, but *τὸ ὀρθῶς παιδεραστεῖν* (*Symposium*, 211 *a*). *Ὀρθὸς ἔρως* is almost a technical expression. *Μείζω δέ τινα καὶ ὀξυτέραν ἔχεις εἰπεῖν ἡδονὴν τῆς περὶ τὰ ἀφροδίσια; Οὐκ ἔχω, ἢ δ' ὅς, οὐδέ γε μανικωτέραν. Ὁ δὲ ὀρθὸς ἔρως πέφυκε κοσμίου τε καὶ καλοῦ σωφρόνως τε καὶ μουσικῶς ἐρᾶν; καὶ μάλα, ἢ δ' ὅς. Οὐδὲν ἄρα προσοιστέον μανικὸν οὐδὲ ξυγγενὲς ἀκολασίας τῷ ὀρθῷ ἔρωτι; Οὐ προσοιστέον. Οὐ προσοιστέον ἄρα αὕτη ἡ ἡδονή, οὐδὲ κοινωνητέον αὐτῆς ἐραστῇ τε καὶ παιδικοῖς, ὀρθῶς ἐρῶσί τε καὶ ἐρωμένοις; Οὐ μέντοι μὰ Δί', ἔφη, ὦ Σώκρατες, προσοιστέον* (*Republic*, 403 *a*, *b*).

It remains for us to discuss the influence which these experiences had on the Ideal Theory regarded as an attempt at systematic philosophy. In the first place it accounts for the separate reality attributed to the Ideas. That is, no doubt, a logical thesis capable of being discussed on its own merits, but it was not logic alone that created the theory. In the *Cratylus* we find Plato confronted by the problem which the Ideal Theory claimed to solve; but the fact of the existence of Ideas was borne in upon Plato by a sudden and unaccountable experience.

This suggestion also removes the main difficulty about Plato's Dialectic as a method of thought; for it is no longer true that he is endeavouring to establish a science independent of all experience. Kant's proof of the necessity of the figure in geometric reasoning could no more be alleged as a refutation of the possibility of Dialectic. For the Ideas are, on this hypothesis, to be themselves regarded as actual matter of experience. The advance from *διάνοια* to *νόησις*

is not from thought with a figure to pure thinking (in the modern sense), but from thought where a sensible object is used as an inadequate representative of the Idea, to thought where the Idea itself is directly apprehended and no representative is required. The method therefore is independent of bodily sensation but is not independent of experience or intuition (*Anschauung*).

Thirdly, our suggestion explains the chief difficulty about the realm of Ideas itself, which is the fact that on logical grounds the Ideal world should be no better and no worse than the actual; whereas of course it is treated as perfect in all respects. The only approach to an argument for it contained in the *Republic* is at 476 *a*: "Since beautiful and ugly are opposite they must be two; but if both are two, each is one". The Ideal world, then, may contain perfect beauty, but will also contain utter ugliness: and so each good Idea is balanced by a bad Idea. For it can hardly be urged that the perfection of the perfectly ugly is a good quality. Nor can it be pleaded in his defence that he regarded injustice or ugliness as a mere absence of beauty and justice, so that only the good qualities need be conceived as Ideas. The passage just quoted from the *Republic* forbids that, and the *Phædo*, 103 *b*, is decisive: *αὐτὸ τὸ ἐναντίον ἑαυτῷ ἐναντίον οὐκ ἂν γένοιτο, οὔτε τὸ ἐν ἡμῖν, οὔτε τὸ ἐν τῇ φύσει*—(a passage, by the way, which is also quite decisive against the conceptualist interpretation of the Ideas). No doubt the Platonists subsequently got out of the difficulty by denying Ideas of *στερήσεις*. But where does Plato commit himself to the view that *ἀδικία* (*e.g.*) is a *στέρησις*? He had far too vivid an appreciation of the evil that is in the world to be content with such an evasion; for why is there any such *στέρησις* in a world governed by the Idea of Good? If the conditions of spatial and temporal existence require it —why those conditions? Plato's whole philosophy requires a positive principle of evil somewhere in the real world; yet his Ideal Theory does not contain it.

The incompatibility of Plato's conception of the Ideal World with the necessary conclusion of its logical basis need cause no perplexity to any one who believes that the Ideas were for him the objects of an artistic and almost religious experience. The emotional and moral value of the Ideas was determined for him by the experience in which they were discovered. Logically he should have believed in Ideal Ugliness; but he had seen the Idea of Beauty, and the Ideal world took its value not from the argument but from the experience. His mind was obsessed by the excellence

of that Idea, and the excellence was illogically but very naturally extended to all other Ideas. Only when the vision had faded did the difficulty of Ideal Hair and Ideal Mud begin to make itself felt (*Parmenides*, 130 *d*). The conviction of the beauty and glory of the Ideal World is prior to all argumentation about the Ideas; the argument moves within the limits of that firm conviction.

I think Plato identified the object of his vision with the Ideal Beauty, and that this was the only Idea he had seen. We are practically told in the *Republic* (506 *b-e*) that he had never experienced the Idea of Good, and both the descriptions of the ecstatic vision treat its object as Beauty: and in the *Phædrus* (250 *d*) it is suggested that Beauty alone of the Ideas is accessible to human experience during the period between birth and death.

Let me summarise briefly. In the earlier Dialogues, down to and including the *Cratylus*, we find Plato coming more and more into contact with the problem of the relation of Knowledge to Reality. Then suddenly all doubts are set at rest by an experience of some brilliant light, which he takes to be Ideal Beauty itself. This vision is recoverable; it may be induced by τὸ ὀρθῶς παιδεραστεῖν. The metaphysical view of Beauty suggested is at once extended to all excellent or indifferent attributes, and though by implication it covers objectionable attributes also, this is not made explicit and the results of this implication are not faced. The Ideas are not mythical, but the subject-matter of the highest scientific knowledge. They are used as the metaphysical basis of scientific ethics. Then in *Republic*, X., Plato, feeling anxious about his rejection of Art, sees that by a legitimate extension of the Ideal Theory to cover, not only attributes, but general nouns, he can support that rejection; he accepts that extension, thereby preparing the ruin of the Theory. The τρίτος ἄνθρωπος argument here incidentally introduced also contributes to that ruin. In the *Parmenides* the Theory is annihilated, and in the *Timæus* the Ideal World is part of a mythical structure.[1] The blood had cooled and the vision had faded; whatever the experience may have been, at least the interpretation put upon it had been false. But the later dialogues have lost in fire all that they have gained in method.

To us the Ideal Theory is myth, as it was to Plato in the later period. Prof. Burnet wrote recently in MIND (N.S.,

[1] Let me repeat that I mean the "old ideal theory" with its basis of ecstatic vision and, in consequence, independently existing Ideas. Plato of course never denied the real significance of general terms.

57, p. 101) of the myths—"They have their roots in something older than philosophy, and possessing a vitality which is denied to philosophical systems". And just before (p. 100) he had pointed out that Aristotle, who begins with accepted facts and ends in myth, has always been a pillar of orthodoxy, while "most heresies come from Plato" because he insists on scientific treatment of ultimate questions. This is no doubt true; but this distinction is rooted in another. Here, as in all departments of human activity, the ultimate fact is temperament. Aristotle was bound to produce a philosophy which would be a basis for orthodoxy, for, colossal as was his intellect—perhaps the greatest in history,—he was by temperament a churchwarden; and Plato was bound to be the philosophic father of many heretics because he was by temperament a Titan. There is an inspiration in the spectacle of the old philosopher tearing in shreds his proudly built philosophy and beginning it all afresh. But among his actual works what I have called "the old Ideal Theory," which he himself rightly discarded, is worth more to mankind than the method of division elaborated in the *Sophist* and the *Politicus*, or the insertion of ὅποσα between τὸ ἓν and τὰ πολλὰ as desiderated in the *Philebus* (16 *c-e*). These may be of great scientific value, but they impart no impulse. The Ideal Theory, as held by Plato in his middle period, may be myth; but it is the outcome and expression of something more valuable than any specific doctrine, however true—of intellectual courage that refuses to allow any sphere to be set beyond the reach of knowledge, of mystic vision in which all that is mean and sordid disappears, and of temperamental fire without which no great achievement is possible in action or in art.

## V.—DISCUSSIONS.

### PLATO OR PROTAGORAS?

It is very satisfactory to find that so high an authority on Platonic philosophy as Prof. Burnet agrees with me as to the main philosophic contention of the pamphlet with this title which he reviewed in the last number (p. 422). He recognises with me the remarkable fact that there is *no* refutation of the 'Protagoras' Speech anywhere in the *Theætetus*. It is to be hoped, therefore, that the widespread delusion to the contrary has received its *coup de grâce*, and that the groundless allegations based on it will gradually disappear from the literature of the Humanist controversy.

It would have been doubly gratifying if Prof. Burnet had seen his way also to accept the historical explanation which it seemed to me most reasonable to suggest for this remarkable fact. But this, perhaps, was too much to expect. For Greek history is a highly subjective science, on which opinions are sure to differ, and the history of Greek philosophy in particular is a subject in which certainty is impossible and *quærit sua dogmata quisque, invenit ac pariter dogmata quisque sua;* and concerning which, therefore, a reasonable man will be loth to dogmatise. Prof. Burnet, therefore, will probably pardon me if I continue to prefer my theory to his. It still seems to me the most reasonable and probable and best attested explanation of the facts we both recognise, and, frankly, I am a little surprised to find how far from cogent are his objections to it. And as it is of some importance for us to think that we not merely know Protagoras's dictum, but also the reasons he gave for it, I will venture to uphold my theory even against Prof. Burnet's authority.

The facts I had argued from were that Plato had not refuted the Protagoras Speech, that nowhere else in Greek philosophy is there any sign of an authentic and independent knowledge of the grounds for Protagoras's dictum, and that Plato himself exhibits a curious *malaise* in dealing with the Protagorean position. On these grounds I inferred that he was probably relying on oral traditions about a work which he was not able to consult because it had already perished. To account for this I appealed to the story about the persecution of Protagoras, as possibly rendering intelligible what would otherwise be an inexplicable situation. In his reply Prof. Burnet tells me that my view rests on a 'combination' (as I was of

course aware), and simply sets aside the story in Diogenes Lærtius as something which "no one now accepts". Seeing, however, that the story is alluded to not only in Diogenes Lærtius but in Sextus Empiricus and Timon of Phlius, the sillographer, and in short is part of the general tradition, and that moreover it still figures in the latest, and perhaps greatest, of the historians of Greek philosophy, Prof. Gomperz, this verdict seems somewhat *outré*.

Prof. Burnet, however, fortunately does not merely pass judgment but also wisely gives reasons for his opinion. He quotes in its support what seems (as stated) to be conclusive proof of the survival of the book I had supposed to have perished. He gives a reference to Eusebius (*Præp. Evang.*, x., 3, p. 468) as proving that "As a matter of fact Porphyry read it centuries afterwards and quoted it verbally, though Eusebius . . . unluckily omitted to transcribe the quotations".

I can hardly believe, however, that Prof. Burnet had refreshed his memory of Eusebius before adducing this argument. For what are the facts in full detail? Eusebius, in the course of a controversial argument (which is itself not above suspicion), professes to quote from an otherwise unknown work of Porphyry's, a Dialogue on Literature (which for all we know may have been a work of fiction or a *jeu d'esprit*), what purports to be a report of a conversation at a memorial banquet given by Longinus, in the course of which, after a number of improbable and (so far as we can test them) groundless charges brought by others of the company against other writers, an otherwise unknown philosopher, named Prosenes the Peripatetic, professes, at an advanced stage of the banqueting, to have read an otherwise unknown work of Protagoras 'About Being,' which he asserts to have been directed against the Eleatics and to have been extensively plagiarised by Plato. I regret that the above sentence is rather involved; but it faithfully reflects the complication of the allegation. On the strength of this yarn Prof. Burnet apparently adopts the unsupported conjecture of the (anonymous) contributor to Smith's invaluable *Classical Dictionary* (which is, however, rejected by the latest editor of Eusebius, Dr. Gifford), that the book referred to is identical with Protagoras's famous treatise on 'Truth'.

Now, while I would not deny the bare possibility of this after-dinner story, and am willing to admit that 'Diogenes Lærtius' is very uncritical and vastly inferior to more recent historians of philosophy, I cannot but think that yarn for yarn his is far more credible and better attested than any of this third-hand stuff in Eusebius. The following more specific reasons may be given:—

(1) It is possible, but not probable, that the *Magnum Opus* of Protagoras had as many titles as a Spanish grandee or as Humpty Dumpty's famous poem in *Alice through the Looking Glass*. It may have been Περὶ τοῦ Ὄντος, though it was called Μέγας Λόγος; its name may have been Περὶ θεῶν, though it may have been

called Ἀλήθεια ἢ Καταβάλλοντες. But *prima facie* an allegation about a Περὶ τοῦ Ὄντος is hardly a proof of the survival of an Ἀλήθεια of which for five centuries or so no one else betrays any textual knowledge.

(2) Porphyry's lost 'Dialogue' hardly seems historical enough itself to guarantee the historicity of the very improbable assertions of Prosenes.

(3) Even if Porphyry was trying to give an authentic account of an actual banquet, it seems very hasty to conclude that the facts were as reported. Prosenes the Peripatetic may have been jesting or lying. Or possibly he may only have been trying to shock the prejudices of the company and especially of his respectable neighbour, Kallietes the Stoic, to whom apparently his fearful revelations about Plato's iniquity are something quite unheard of. The banquet was given in commemoration of Plato, and so the context rather suggests that Prosenes was playing the devil's advocate and animated by the amiably critical feelings towards Plato which had become traditional in the Peripatetic School ever since the day when its founder failed of election to the headship of the Academy, and started to differentiate his views from those of his master in ways which still sorely trouble the conciliatory providers of pap for the Oxford 'Greats' School.

(4) Even if Prosenes did not lie as to the existence of a book of Protagoras's 'About Being,' there is no reason to identify it with the Ἀλήθεια. It is decidedly more probable that the work (if it existed) was (as stated) directed against the Eleatics. In the fifth century B.C. Eleatics paradoxers, constantly intruding Zenonian subtleties into the ordinary business of life, must have been a regular lecture-room pest and a serious nuisance to practical educationists like the Sophists. Indeed it has long seemed to me highly probable that Gorgias's famous argument about the non-existence of 'Nature' was not a prosaic account of his own deepest convictions, but intended merely as an annihilating skit upon Eleatic metaphysics. Why should not Protagoras, who doubtless was similarly molested, have likewise retaliated with a polemical pamphlet?

(5) Even so, it is hard to believe in the veracity of Prosenes. It does not seem probable from Plato's extant writings that he would have found much to plagiarise in an attack upon the Eleatics. But if Prof. Burnet will assure us that he can believe *the whole* of the story, I will try to believe as much of it as I can. Plainly at a pinch I could extract not a little satisfaction from the idea that Protagoras also had been among the teachers of Plato.

But as matters stand, the proof from Eusebius of the latent existence of Protagoras's prosecuted work seems to me to break down utterly. Prof. Burnet, however, does not wholly rely on it but adduces other evidence also against my theory.

(1) He takes the *Meno* (91 E) to prove that Protagoras died in

'good repute,' and could never, therefore, have caused a scandal and suffered persecution.

To which it may be replied—(*a*) that if (as I supposed) Protagoras's final lapse from respectability occurred at the end of a long and useful career, during which he had successfully 'prepared gentlemen's sons for the army, the navy, and all the professions,' and was promptly punished by the suppression of the offende and his scandalous work, a reference of this sort might well have come from Plato's pen forty or fifty years afterwards (accepting Prof. Burnet's date for the *Theætetus*). Indeed the language of the *Meno* might surely have been used without gross literary impropriety even at my 'imaginary date' for the dialogue, *viz.*, a dozen (or even half a dozen) years after Protagoras's death. For though the shock caused by the revelation of Protagoras's free-thinking was doubtless great and possibly as severe as if a retired Headmaster of Eton or Dean of Christ Church should nowadays be beguiled into publishing an attack on the Virgin Birth, it must be remembered that the circumstances of the prosecution were probably peculiar. According to the ordinary view Pythodorus procured the condemnation of Protagoras during a very disturbed episode in the history of Athens, the rule of the Four Hundred (411 B.C.). The proceedings may, on this account, have been unusually prompt and possibly irregular. The very success of the persecution, however, at the time would facilitate comparative oblivion of the offence and the reinstatement of the older admiration for Protagoras's character. For once the book had ceased to exist, it could no longer shock at first hand, and thus Protagoras's grateful pupils would find it all the easier to rehabilitate his memory.

(*b*) It is not however strictly necessary to suppose such a tacit revulsion in public opinion about Protagoras. For even if the pious folk at Athens remained implacable, it does not at all follow that Plato and his friends assented to their attitude. Plato after all was a modernist in his day, who in the *Euthyphro* and elsewhere showers the most scathing satire upon popular religion. Nor was he politically so orthodox as to approve of whatever Athens did on general principles. His feelings towards the constitution of his native city were such that 'good repute' in his eyes was usually highly antithetical to what the democracy understood by the same term. He takes special pleasure, for example, in praising and idealising ruffianly aristocrats like Critias, Charmides, Alcibiades and Meno himself, and this although they were not *all* his own uncles. What more natural then than that the 'good repute' of Protagoras should only be enhanced by an Athenian condemnation?

(*c*) But after all the simplest explanation of the passage in the *Meno* lies in its context. 'Socrates' just then is deliberately trying to 'rile' Anytus, presumably because Plato is desirous of

exhibiting the narrow-minded hostility to culture of his master's democratic accuser. Anytus finally loses his temper and coarsely threatens to 'do for' Socrates. If Protagoras, like Socrates, had really been condemned, the allusion to his stainless reputation would surely be an exquisitely subtle touch.

(*d*) The close collocation of Socrates, Protagoras, and Anytus in the *Meno*, therefore, is doubtless significant. But it suggests quite another interpretation than Prof. Burnet's, and one to my mind far more pleasing. If Protagoras and Socrates had both fallen victims to Athenian intolerance on much the same grounds, would not Plato wish to show what manner of men compassed their destruction? This would explain also the most-favoured-Sophist treatment which Plato throughout his dialogues, rather conspicuously, accords to Protagoras. Any one of these four suggestions seems as probable as Prof. Burnet's, and if any or all of them are true, the *Meno* will really tell in favour of my theory as against his.

(2) Prof. Burnet questions my allusion (p. 8) to the professional rivalry between the philosophers and the Sophists, admitting only that Isocrates was Plato's rival and urging that *he* called Plato himself a 'Sophist'. He does not mention that curiously enough Isocrates is called a pupil of Protagoras, and that therefore the admitted rivalry between him and Plato would supply a special motive for Plato's attacks on Protagoras. Still it is not necessary for me to suppose that until Plato and Aristotle had succeeded in giving the dog a thoroughly bad name, the term 'Sophist' was more opprobrious in the eyes of enlightened people then than the title of 'Professor' is now.[1] The general motives, moreover, for the philosophers' hatred of the Sophists are surely so transparent as to need no special attestation. Plato thought that philosophy was a study to which a Greek gentleman ought properly to devote the whole leisure with which the ideal Greek city ought properly to endow him. The Sophists attempted nothing so paradoxical as this combination of unlimited devotion to the theoretic State with complete abstention from its practical service until such time as the millennium should arrive, and bring with it the καλλίπολις. They aspired only to be purveyors of a practical education for actual life, which was largely concerned with rhetoric, and (like our Oxford 'Greats' School) aimed only at a gentlemanly acquaintance with fashionable philosophic puzzles that should suffice to enable men to give them a wide berth in after life. The wickedness of this policy *saute aux yeux* to a man of Plato's temper. But what was still more galling was that then (as now) the great majority of young men preferred to 'cram' philosophy rather than to sacrifice their life to it. Wherefore they went to the Sophists. In passages like *Rep.* 498 A Plato really gives himself away completely.

(3) Prof. Burnet attaches some importance to the *Theætetus* 152 A as proving the actual existence of the Ἀλήθεια in Plato's time.

[1] *Cf. Studies in Humanism*, pp. 31-32.

But surely this proves nothing at all. How could Theætetus have been represented as *not* having read Protagoras? 'Dramatic propriety' surely forbids this as plainly as critical sanity forbids our attaching historical importance to a statement of this kind.

(4) Prof. Burnet has an ingenious theory connecting the presence of Theodorus and Theætetus during the discussion of Protagoras's doctrine with an obscure incident in the history of mathematics. This 'combination' rests on a narrow basis of highly dubious evidence. If Protagoras had been a modern professor, living in a highly sophisticated academic atmosphere, it might perhaps be necessary to have recourse to so recondite an explanation. But the world in which he moved and taught had not surely then become so academic that he need have launched his great Dictum against the petty perplexities of Pythagorean mathematics. Moreover, we know from Aristotle (*Metaphysics*, ii., 2, 998*a*) that Protagoras had grasped the vital distinction between perceptual and conceptual space and so was not bound to attribute to reality the difficulties inherent in the concept of continuity. It was very urgent on the other hand to reflect on the great practical problem of the age, the popular distinction of νόμος and φύσις, and to proclaim the great discovery that every one does naturally perceive, feel, and think differently from every one else, and so to suggest an explanation for the bewildering variety of human customs and beliefs, and to enable men to conceive objective 'truth' not as an initial gift of the gods but as a practical and social problem. If then there was an important and obvious way of reaching the 'Measure,' why suggest one so much more obscure and technical, of which moreover our sole primary authority, Plato himself, gives no hint?

A far easier and more adequate reason for the introduction of Theodorus will, I believe, suggest itself if we go through Plato's references to Protagoras in what is presumably their chronological order. For if we accept the order of Plato's writings suggested by Prof. Lutoslawski's stylometric researches, we find that Plato realised the *philosophic* importance of Protagoras slowly and progressively and comparatively late in life, in a way which almost excludes the idea that the treatise on 'Truth' had from the first a place in his library.

In the *Protagoras* Plato presents Protagoras only as the great popular teacher. In the *Meno* we saw that he seems to be regarded as a martyr to the cause of culture, like Socrates. In the *Euthydemus* (286 c) Plato begins to awaken to the philosophic import of Protagoreanism. He has come across 'followers' of Protagoras who appear to him to deny the possibility of contradiction. This causes an outburst of polemic and leads in the *Cratylus* (385-6) to the first mention of the great Dictum, which is there assailed by what I venture to call the stock Platonic 'caricature' and denounced as destructive of all distinctions between

the wise man and the fool. The *Theætetus* lastly rises to detailed criticism, which begins on the level of the *Cratylus* with a more elaborate version of this 'caricature,' then suddenly replies to it by the speech (which I suspect of being the genuine doctrine of Protagoras), but finally reverts to the caricature, without refuting the 'speech'. Clearly something has happened, in the interval between the *Cratylus* and the *Theætetus*, which has enabled Plato to see far deeper into Protagoras than he had ever done before. Clearly also the Speech, by establishing distinctions in value between one man's 'truth' and another man's, is a complete refutation of the criticism of the *Cratylus*, and has quite the air of a reply to it. *What then was the 'something'?*

It is evidently preposterous to suppose that Plato first *read* the Ἀλήθεια after composing the *Cratylus*. If he had ever read it, he would surely have realised its importance at once. But if he had not read it (for the reason that it was no longer extant) and his account was in consequence a caricature, those who remembered the authentic argumentation of Protagoras may well have taken him to task. We may then suppose that in the *Theætetus* Plato both incorporated the substance of these remonstrances and essayed (but failed) to answer them. If so, Theodorus (and perhaps also Theætetus) may have been the person who expostulated with Plato, and as a reward was described by him as no philosopher but a good mathematician. Indeed we may go on to explain similarly the allusion to the 'defenceless orphan'. If the book of Protagoras was still extant, his doctrine (the Measure) was hardly defenceless. For the works of great writers can speak for themselves, and have a knack of recoiling upon those who attempt to distort them. If however the doctrine survived only in the memories of a few friends, mainly interested in other subjects, it was truly deprived of its 'father' (the book). Theodorus then may well have described it as a 'defenceless orphan,' and the phrase may have formed part of his rebuke to Plato. And lest chronological objections be raised against this suggestion, we need only suppose that the account of Theodorus's defence of the 'orphaned' doctrine was written by Plato soon after the composition of the *Cratylus*, though it was only fitted (more or less) into its present place when the *Theætetus* was completed years afterwards.

(5) The last of Prof. Burnet's arguments is based on a passage in the *Protagoras* (317 c), in which Protagoras emphasises (or as some of the authorities say 'boasts') his seniority to the other persons present, including Socrates. Now it is of course not easy to say how much actual seniority would make a man anywhere or at any time feel like saying that he was 'old enough to be another man's father,' and even on the usual view Protagoras was a dozen years older than Socrates. But need we suppose that Protagoras was speaking with modern Teutonic literality and exactitude, and that *therefore* Protagoras must have been a generation older than

Socrates and born about 500 B.C.? May we not suppose that Plato's "consummate dramatic art" has intervened and emitted a *façon de parler*, which is not to be taken too seriously? After all Plato never impresses one as meticulous about the chronological exactitude of his 'imaginary conversations,'[1] and the *Protagoras* in particular appears to present other anachronistic 'combinations' which excited comment even in antiquity.[2] I do not think that Prof. Burnet can fairly press this point.

Nothing then remains of Prof. Burnet's objections to my theory, except his own counter-theory. This however is intrinsically too delightful and æsthetically too attractive not to be briefly considered. It supposes that Plato wrote the Protagoras Speech, and refrained from refuting it because he accepted its position and was "more of a humanist" than I suspected. Carried to its logical conclusion this theory would have, I imagine, to assert also that the *Theætetus* is implicitly a confession by Plato of the impossibility of refuting humanism and accounting for Error on intellectualistic grounds.

What splendid vistas this conception opens! It pictures Plato as realising late in life the fundamental flaw in his assumptions, and perceiving that the Ideal Theory explained nothing, just because by being elevated above the Flux it had lost all touch with humanity, that after all the problem of Truth and the problem of Error were one and the same and a question of human values, and that the true Sage was not a spectator of the immutable, whose postulations flee to ideals unrealisable, but a controller of the flux of things, whose judgments approve themselves as the *better* for the purposes of human life. And yet, pathetically enough, the limitation of his mortal span prevented the grand old man from going beyond a confession of failure and disabled him from enshrining his new convictions in a constructive exposition. Nevertheless the *Theætetus* and the *Parmenides* are enduring monuments of a change of mind and absolve the soul of Plato from the charge of having died in blind and impenitent intellectualism; but, alas, they could do no more! They did not avail to undo the mischief of his more brilliant and pictorial earlier works, because they were themselves interpreted in the illusive light of his discarded doctrine. Blinded by intellectualistic glamour and diverted from the path of progress by the strong and subtle bias of their emotions, seventy generations of rationalistic philosophers have believed Plato to mean the very contrary of what he said, and so have denied the plain facts that confronted them in his maturest writings. Surely a splendid testimonial to the greatness of Plato, and a superb object-lesson in the potency of prejudice!

[1] Even in the case of the *Republic* it is quite arguable that Cephalus must have been dead before Glaucon and Adimantus were born.

[2] *Cf. Athenæus*, v., 218.

Philosophically, *je ne demande pas mieux*. The theory not only recognises the facts to which I have tried to draw attention, but far surpasses my humble inferences. I feel sure too that there is much truth in it. I have long been aware that there is something seriously wrong in the traditional interpretation of Plato as an intellectualist *sans peur et sans reproche*, and have tried to make clear that at any rate he was conscious of vital difficulties which his followers have ignored (without solving) for over 2,000 years. It is well also to remember that after all Platonism must have carried in its bosom the germs of the Middle Academy, which may be succinctly described as a sceptical despair of absolute truth tempered by pragmatism, although the position of Carneades seems to me to coincide (almost completely) with that now occupied by Mr. Bradley rather than with humanism.[1] But on *historical* grounds I hesitate before assenting to Prof. Burnet's ultra-Jacobin interpretation. I should like to see the evidence marshalled more completely. Prof. Burnet, who knows far more about Plato than I can profess to do, could no doubt do this to perfection, and he would thereby confer an immense benefit on students of philosophy. But I confess I do not see it *yet*, even as regards the *Theætetus*. I am however only too willing (if that be possible!) to be convinced. For a proof of Plato's final humanism would mean that we could improve on the cry 'Plato *or* Protagoras!' by substituting 'Plato *and* Protagoras!'

F. C. S. SCHILLER.

[1] *Cf.* MIND, N.S., 67, pp. 381-383.

## IMPORT OF PROPOSITIONS AND INFERENCE.

On page 190 of the fourth edition of his *Formal Logic* Dr. Keynes observes in a note that while "practically borrowing" my account of the import of affirmative categorical propositions[1] he is "unable to agree with my general treatment of the import of categorical propositions as I do not appear to allow that before we can regard a proposition as asserting identity of application we must implicitly, if not explicitly, have quantified the predicate".

At the same time in note (*c*) on page 244, he objects to my argument that "if *some* carries with it an implication of existence, when used with a subject-term, it must do so equally when used with a predicate-term; but the predicate of an A proposition being undistributed is practically qualified by *some;* hence, if *Some S is P* implies the existence of S and therefore of P, *All S is P* must imply the existence of P and therefore of S. In reply to this argument it may be pointed out, first, that a distinction may fairly be drawn without any risk of confusion between a term explicitly quantified by the word *some* and a term which we can show to be undistributed but which is not explicitly quantified at all; and, secondly, that the position which we have taken is based upon a consideration of the import of propositions as a whole, not upon the force of signs of quantity considered in the abstract."

In answer to this I should like to ask: (1) Does not identity of denotation or application involve implicit quantification, seeing that it must involve determination of the Quantity of the Predicate, *i.e.*, must regard the Predicate as either distributed or undistributed (*i.e.*, either definitely distributed, or not definitely distributed)? Unless this were so, the Predicate would be considered only in intension. (2) Does not the assertion that "the predicate of an A proposition being undistributed is practically qualified by *some*" involve recognition of the implicit quantification of the predicate? Thus Dr. Keynes's second criticism would appear to cancel his first.[2] And when Dr. Keynes proceeds to object to my account of

[1] This account is to the effect that affirmative categorical propositions assert "identity of application in diversity of signification"—or, as I would now prefer to say, "in intensional diversity".

[2] I would refer also to Dr. Keynes, p. 422, and *e.g.*, section vii. ("Quantification and Conversion," etc.), especially p. 65, top, in my *General Logic*, and the statement on p. 24, section iii. (on "Categorical Propositions as Wholes"), that "S is P (SP) and S is not P (S) (P) represent every possible Categorical Proposition".

categoricals because "the position which we (Dr. Keynes) have taken is based upon a consideration of the import of propositions as a whole, and not upon the force of signs of quantity considered in the abstract," I would remark that it is my analysis of the import of propositions which I regard as the central point of my whole view, and that this analysis (identity of application in intensional diversity) to my mind absolutely involves that "the import of propositions *as a whole*" should be considered. It is also I may observe inseparably bound up with the whole theory of Inference, Mediate and Immediate, and is, I believe, the only theory of the import of propositions which can be made really coherent with Deductive (and Eductive) Inference. Thus in affirmative Immediate Inference (Eduction) it is on identity of denotation that all possibility of inference hinges, and in Mediate Inference (Deduction) the only condition necessary to make possible *some* valid inference from two premisses is identity (whole or partial) of denotation of the Middle Term.

As regards Inference, Dr. Keynes would, I believe, agree with the view to which I adhere, that for Inference expressed in propositions:

(1) There can be no difference or newness of *fact* as between Inference and Inferend.

(2) There must be some difference of expression, corresponding to

(3) Some thought-difference, *i.e.*, in Inference we must pass from *one* assertion (or judgment) to *another*.

The difficulty in determining what is and what is not inference is just the difficulty in determining what exactly is meant by *thought-difference*, by 'another' judgment or proposition.

Dr. Keynes considers that in cases of contra-position there is thought-difference (with difference of verbal expression and without difference of 'fact') and seems to make obviousness the test. But what is obvious to one thinker may not be obvious to another. Any concrete inference however complicated may be obvious to a person sufficiently familiar with the assertion inferred from. And no doubt every 'inference' (usually so called) from *Only S is P*, including its contra-positive *No not-S is P*, would be perfectly obvious to a person who has grasped the form of the proposition and has carefully thought of what it (1) asserts and (2) logically involves, while to a beginner, otherwise intelligent, not only are they not obvious, but they may be right-down puzzling at first and take some time and pains to make sure of.

Again, if contra-position is inference, what is to be said about obversion and conversion, into which every case of contra-position may be analysed? Is Obversion inference? If not, is Conversion inference? If not, either (1) inference results from putting together two processes neither of which is inference, or (2) contra-position is not inference. We must accept (1) or (2), or allow Obversion or Conversion or both to be inference.

Let us pass to some "limiting case" and take first a concrete example suggested by Jevons which Dr. Keynes discusses, namely, Is there inference when we pass from: Victoria is Queen of England to Victoria is England's Queen? Dr. Keynes observes that there is here no inference because there are not two "different judgments" (p. 416).

Of course the whole question is: What constitutes difference of judgment (or assertion)? We have agreed that in an inference there can be no 'objective' newness, also that there must be *some* difference of expression. There is here some difference of expression—and no 'objective' newness, no factual or 'real' difference. Is there any thought-difference?

A difference may indeed be something very slight indeed, but if there is the slightest possible difference, then, it must be admitted, a difference there is. And it seems to me quite hopeless ever to draw a line between what is and what is not inference, if the point of distinction is to be a *more or less* of difference. There is either something changed, or there is not, and the something may be ever so insignificant—a cloud like a man's hand—but if it is there it makes all the difference.

Now where there is a difference of expression it is allowed that there may be, and there *frequently* (I believe *always*) is, some corresponding difference of thought. I am not alarmed by Mr. Bosanquet's pronouncement (quoted by Dr. Keynes, p. 422) that the question Whether there is inference in conversion is "a point of little interest". In a given case, no doubt, it may be of little interest, and as much ingenuity may be needed to exhibit its importance as is expended by Carlyle in order to account for the extraordinary, and apparently exaggerated interest which we feel in any "squalling impotency at the font". The baby-inference, like the helpless little human baby, holds vast possibilities, and hence both deserve not only tender treatment due to their feebleness but also consideration in view of contingent developments. If we choked off conversion we should have (theoretically) no inference—as if we strangled the human babies we should (actually) have no one to live the life and think the thoughts of men.

It will be allowed that without definite information to the contrary, we may assume, in Logic as in common life,—

(1) That S has the same intension and application as S.

(2) That S is P has the same meaning as S is P.

But it cannot be similarly assumed—

(3) That S and $S^2$, or S and Z have the same intension and application, or

(4) That S is P and S is $P^2$, or S is P and S is Q have the same meaning.

On this view it can be only as a matter of grammatical or linguistic convention that

England's Queen
and Queen of England

are equivalent in meaning and therefore in application; and as a matter of fact whoever knows this, knows it only because he has heard it or read it. In some phrases similarly formed there is not this clear equivalence. *Chicken's dish*, *e.g.*, does not mean the same as *Dish of Chicken*. In (1) *Dick's Friend*, (2) *Friend of Dick*, (1) may be conventionally understood to emphasize Dick's share in the relation, while (2) would often be understood to lay stress upon the kind feeling entertained by the friend. Again, a man's or horse's master may not be master of that man or horse, and A Captain of Horse does not mean any horse's Captain. Compare Church of England, England's Church, Boys' school and School of boys, etc.

Where two words or phrases have exactly similar *connotation*, *intension* cannot be wholly similar because the words or phrases *are* two—the whole qualitative content of the one case is different from the whole qualitative content of the other, and it is part of the history of the connotation (or of that of which it is the connotation) that in a given language it has two (or more) verbal forms—or that *e.g.*, what is called Tapferkeit in one language is called Valour in another. The whole surplusage of intension over connotation, which includes, of course, much more than verbal connotation, is overlooked by Mill in his account of the Import of Propositions, and also in his contemptuous and even absurd treatment of Proper Names. He seems to think that such names ought more justly to be called Improper Names, as not being fit or worthy to be mentioned in a treatise on Logic, and ruthlessly shoulders them aside. Mill did not seem able to allow for the historic aspect which is indispensable and even fundamental in Logic as in life. Connotative names are for him the only names of importance in Logic, propositions of which both S and P are connotative, the only categorical propositions worthy of analysis. Consider his whole treatment of import of propositions, and the most general analysis of propositions which he gives: "Whatever has the attributes connoted by the subject, has also those connoted by the predicate"—(§ 4, chap. v., book i. of Mill's *Logic*). Compare end of § 2 of same chapter: "Wherever we find certain attributes, there will be found a certain other attribute". This account seems precisely appropriate only to cases where the subject-terms are names for "important results of abstraction" as distinct from (1) descriptive terminology, (2) Nomenclature (Mill's *Logic*, ch. vi. of bk. iv.).

This is perhaps to be explained (though not justified) by the consideration that for Mill all Logic centred round 'Induction,' and that for getting any 'new' knowledge some fresh connexion of connotations is essential. Jevons in his attack on Mill's doctrine of Proper Names seeks to supply the obvious shortcomings of that doctrine, and a similar aim underlies the more recent efforts of

some modern Oxford logicians to assign 'intension' to 'Proper' as well as General names. But both efforts have suffered for want of a clear distinction between Intension (= the whole qualitative aspect of names) and Connotation (= the conventional intension).

We must observe that Mill tends to drop out of account in his treatment of names and propositions not only all surplusage of intension beyond connotation, but also all explicit reference to the extension aspect. But this—the application of names—is in the very forefront of importance. For Mill connotation swells and grows till it almost fills the picture, whether we are dealing with Terms or with Import of Propositions. Connotation (where there is Connotation) may *determine* application. But without application *somehow* determined, all use of names and terms is impossible. Mill himself seems to admit this when he says of Hobbes' definition of Categorical Affirmative Propositions ("In every proposition what is signified is the belief of the speaker that the predicate is a name of the same thing of which the subject is a name"), that it is true of all propositions and is the *only* account of import which is "rigorously true of all propositions without exception". (That it is the *only* account of Import that is quite general, I do not of course admit.) It is odd that Mill, while setting aside and belittling Hobbes' analysis, should have been content to furnish, as his own contribution to the theory, nothing better than an analysis (and an exceedingly unsystematic one) of the imports of *different classes of* propositions.

Hobbes we see lays all the stress on application of names—on the denotation, not the connotation aspect—and this carried on into Syllogism would justify the fundamental importance of identity of application of the middle term (however this identity may be determined). The same would hold of Immediate Inference. And it may be observed that Jevons' doctrine of Substitution of Similars does really lay like emphasis on the supreme part played by application—for the substitution referred to by the "great rule of inference" which Jevons gives, is Substitution not of 'Similars' but of terms having identical application. The rule runs as follows:—

"The one supreme rule of inference consists . . . in the direction to affirm of anything whatever is known of its like, equal or equivalent. The Substitution of Similars is a phrase which seems aptly to express the capacity of mutual replacement existing in any two objects which are *like or equivalent* (=?) to a sufficient (=?) degree" (*Principles of Science*, p. 17). That the substitution here referred to is substitution of terms having identical application is obvious on the most cursory examination and is apparent at first sight from Jevons' own examples in illustration, *e.g.*—

(*a*) Snowdon (1)
Highest mountain in England or Wales (2)
(Something) 3,590 feet in height (3)

(*b*) The Lord Chancellor (1)
The Speaker of the House of Lords (2)
(*c*) God's image (1)
Man (2)
Some reasonable creature (3)

It hardly needs pointing out that in (*a*) and (*c*) (1), (2) and (3), and in (*b*) (1) and (2), respectively, are not qualitative 'similars' but numerical, historical, or extensional, identicals—intension is in each case *different*, but extension (and therefore application) *the same*. On the other hand, taking things that are so 'similar' as to be intrinsically indistinguishable, we see at once that they cannot be thus 'substituted' the one for the other. 'That house,' *e.g.*, may be similar in the highest degree to another standing next it, but the one *is not* the other, and in inference could not be 'substituted' for it. This copy of Giorgione's "Richiesta" may be an 'exact' copy yet could not be 'substituted' for it, as The highest mountain in England or Wales could be 'substituted' for Snowdon. One of a pair of twins may be so 'like' the other as to be almost invariably mistaken for him—yet owing to the one having come into the world a brief space of time before the other, he may be the heir to a dukedom and inheritor of an immense fortune while the other is neither the one nor the other—and to 'substitute' the one for the other would be inadmissible and even felonious.

It is from the point of view that inference depends upon identity of *denotation*, that I would justify the position that the passage from *Victoria is Queen of England* to *Victoria is England's Queen* is "not indeed a formal immediate inference but a syllogism in which an understood premiss has to be supplied: thus, *Victoria is Queen of England, The Queen of England is England's Queen*, therefore *Victoria is England's Queen*" (Keynes, *op. cit.*, p. 416 note).

I would interpret the 'syllogism' not connotationally (as Dr. Keynes suggests) but denotationally, thus:—

Victoria is applicable to what Queen of England is applicable to: What Queen of England is applicable to is what England's Queen is applicable to: Therefore Victoria is applicable to what England's Queen is applicable to.

Or the 'syllogism' suggested might take either of the two following forms:—

(1) If the meaning of *England's Queen* is the meaning of *Queen of England*, then what *England's Queen* applies to is what *Queen of England* applies to: But the meaning of *England's Queen* is the meaning of *Queen of England*: Therefore What *England's Queen* applies to is what *Queen of England* applies to.

Or (2) Terms having the same meaning are terms having the same application: Queen of England and England's Queen are terms having the same meaning: Therefore Queen of England

and England's Queen are terms having the same application.

As thus set out the 'syllogism' in question does not appear to involve any confusion between "two different points of view".

When Dr. Keynes says that "Where one complex term is substituted for another (for example, *England's Queen* for *Queen of England*) there may no doubt be involved some change in the order of thought; but this does not necessitate any change of meaning in the thought considered as a whole" (*op. cit.*, p. 416), I should reply that this seems true of *all* inference—in no case of inference I think can there be "change of meaning in the thought considered as a whole". This follows if we allow that inference is to a large extent a process of discursive (selective and constructive) thought as well as intuitive or perceptive thought, while yet the element of perception or intuition seems to come in, in a very important way, when we are considering how to explain and justify the manner in which hearer or reader or seeker passes from premiss or premisses to the conclusion. If we take the simplest possible case of mediate inference or syllogism, we have *S is M*, *M is P*, entitling us to the inference *S is P*. Here we have, no doubt, as the conclusion, an assertion or proposition, which (*quâ* assertion or proposition) differs in some way from either of the premisses; or from both taken together. At the same time the content of the assertion *S is P* is certainly in some way contained in and justified by *M is P* and *S is M*,—we have no "change of meaning in the thought considered as a whole". (Does not this mean merely *change of fact*, or '*objective*' *change?*) The exact connexion seems to me to be as follows: When as audience we have learnt that *M is P* and *S is M*, and grasped the contents of the two assertions and their connexion, we find that we have really produced a construction in which the connotations or intensions

S and M and P are referred to one denotation (SMP)

Having this whole before us as an object of perceptual thought, or imagination, it is apparent that it entitles us to say not only that *S is M* and *M is P*, but also that *S is P*, and even further, if we wish, that *P is M* and *M is S* and *P is S*, *Not-P is not M*, *not-M is not S*, etc. (I am taking (1) S, (2) M, (3) P to signify:—

(1) All R or some R
(2) All N or some N
(3) All Q or some Q.)

The same might be shown in a similar, though even simpler way, of any case of Immediate Inference.

We may, of course, syllogise and otherwise 'infer' in an unintelligent mechanical way, using the accepted laws of Formal Inference and of the 'systems' concerned as mere 'rules of thumb,' guides blindly obeyed. But if the acceptance of these rules can be justified, it must be *seen* that they are valid. It is, *e.g.*, the vision

actual or possible of a constructed whole, S that is M, M that is P, (SMP) that ultimately justifies the assertion of (among other statements) S is P as an inference from *S is M* and *M is P*.

I believe that a clear distinction between the contrasted attitudes of hearer, reader, or learner on the one hand, and speaker or teacher on the other hand, is very important for a complete and consistent theory both of Important Propositions and of Inference.

E. E. C. JONES.

## VI.—CRITICAL NOTICES.

*Aristotle de Anima.* With Translation, Introduction and Notes. By R. D. Hicks. Cambridge University Press, 1907. Pp. lxxxiii, 626.

Aristotelian students will hardly know how to express their gratitude to the author of this fine work for the service he has done them. The only other edition of the *De Anima* in English, that of the late Mr. Edwin Wallace, was completed before the publication of the revised text prepared by the late W. Biehl, and, apart from this drawback, it has been felt by many that Mr. Wallace allowed Hegelian presuppositions to distort at times his interpretation of the ancient writer. For a number of years the valuable commentary of M. Rodier has been available. But now English-speaking students have at their disposal an edition of at least equal scholarship and authority.

Mr. Hicks has managed to get everything into a single large volume. We have an introduction divided into two parts, the former giving a rapid sketch of doctrines relative to the soul held either popularly or by philosophers in Greece, and concluding with a summary of Aristotle's own teaching, while the second part discusses the sources of the text. Next comes the Greek text with translation on the opposite page. Those that delight in the fairness of the print set before them will be glad that Mr. Hicks has not employed hooked brackets in an attempt (which never really succeeds) to distinguish between what is translation and what paraphrase. Paraphrase, of course, there must be if the meaning of Aristotle is to be made plain; it is impossible to have an English rendering which shall at once be Aristotelian in style and yet transparent to the reader. At the same time Mr. Hicks is quite aware of the danger attending a version in a modern vernacular, that of becoming 'a mere medley of specious paraphrase and allusive subterfuge'. The only safeguard against the abuse of paraphrase lies in the attendant commentary. Readers will thank Mr. Hicks for his luminous rendering and will disagree with his expressions only when they differ from him as to the interpretation of the passage.

Following the text and translation we have, printed separately, the passages in which codex E differs from the ordinary version, and then comes the commentary which, with appendix and index of Greek words, runs to nearly four hundred and fifty pages. The

amount of labour which this represents is vast. Mr. Hicks seems to have consulted every authority on the subject from which the least help was likely to be derived. We have here not only the fruit of all the industry which the Germans have expended upon the text of Aristotle and of the ancient commentators, but Pacius, Zabarella and other scholars of the Renaissance have been laid under contribution. If any one thing is distinctive more than another of Mr. Hicks's position as an interpreter of Aristotle it is the value he attaches to the judgments of Torstrik and the use which he makes of Zabarella and, to a smaller extent, through him, of the mediæval writers. This edition, in short, is a complete edition; its composition is an intellectual feat in which extraordinary erudition and industry are combined with mastery over the material and clearness of exposition. In going somewhat more fully into the contents of the work I shall confine myself to three main objects. I shall point out what seems to me particularly fresh in the treatment of the subject. I shall discuss certain passages of first-rate philosophical importance where it seems to me that Mr. Hicks's interpretation (and in one case the reading he adopts) may be criticised. Thirdly, I hope that I shall not appear to be ungrateful if I indicate the only respect in which there is anything lacking in the work before us, namely the absence of any sustained attempt to estimate the value of the Aristotelian teaching for modern thought, to answer, in fact, the question whether the *De Anima* is of any more value to modern psychology than, say, the *De Respiratione* is to our physiology and anatomy. Mr. Hicks probably is persuaded that a philosophical essay on the subject would be out of place in a work aiming at the exposition of a special treatise and would doubtless refer us to the existing studies of Aristotle's philosophy as a whole, yet surely anything fresh in the exposition, and here it is the maturity and finality of the interpretation which is most noteworthy, demands a new appreciation of the value of the doctrine for our thinking; and again the recent rapid development in modern psychology has altered old perspectives, and makes imperative a restatement of the relations between ancient and modern speculation.

(1) Readers of this work will be impressed by the thoroughness of Mr. Hicks's knowledge of the whole of the Aristotelian writings. One feels that he could have equally well given us an edition of the *Metaphysics* or the *Organon*. Again, our author is no more Aristotelian than Platonist. At every turn the similarity to and contrast with the corresponding Platonic doctrines and passages is indicated, and comparison is made without any display of partiality. Again, the whole subject is approached from the modern point of view with an open mind. The only thing left doubtful is the real opinion of the editor as to whether or not the whole of the speculation in these pages is anything more than a curious piece of antiquarian lore. Most important, whether from the antiquarian or from the philosophical point of view, is the Aristotelian doctrine

of νοῖς. Mr. Hicks here takes up a very cautious attitude. He first narrates the various historical interpretations of Aristotle's meaning. Some have identified the passive intellect with 'the lower faculties (sense, imagination, etc.), in contradistinction to the active intellect,' or with some supposed faculties intermediate between sense and imagination and 'that higher Thought which has found peace in perfect unity with its object'. Active intellect has been by some identified with the mind of God, *i.e.*, the Deity himself, since, to Aristotle, God is νοῦς. Others again, like Aquinas, have held the intellect both passive and active to be immortal and distinct from the mind of God, being in fact a double capacity in the human immortal soul. Mr. Hicks maintains that there is nothing either in Aristotle or in Theophrastus (the extracts from Theophrastus preserved by Priscianus Lydus are presented in an appendix) to make us infer that either passive or active intellect is other than a determination of the human soul. He agrees with Wallace that the active and passive intellects "are not 'two reasons'; they are merely different modes of viewing the work of reason," and he hazards the conjecture that it is in so far as thought is not always present that it is called potential, while it is owing to the fact that all the time the thoughts 'are there,' though we are unconscious of them, that it is called active. This involves a theory of mental latency which our author parallels with the Aristotelian account of the images of sense, which seem to be treated as existent even when we are not conscious of them. This solution of the difficulty is certainly open to criticism (it likens the activity of νοῦς to a series of acts; besides the notion of latent κινήσεις is very obscure), but it at least has the merit of making definite, as Wallace's language does not, the difference between the 'modes' or aspects of activity and passivity in intellect. In accordance with this theory no transcendental interpretation is assigned to the famous οὐ μημονεύομεν δέ of III. ch. 6. We do not remember the activities of our intellect when the thinking is 'latent'; there is here no reference to a previous state of existence.

Connected with the subject of the relation of 'common' to special sense Mr. Hicks's most important conclusions will be found not in the introduction but in the commentary (pp. 443 *sqq.*, 530 *sq.*). He says 'it seems a mistake to attribute to sight or any of the special senses the power of discrimination between homogeneous objects simultaneously present, except in so far as a special sense is employed as an instrument by the central sense'. But if the 'common' sense as a discriminative faculty is the ground of discrimination in all sensation, I hardly see how it can be said that 'each special sense judges its objects successively, not simultaneously'. In so far as it *judges* at all the special sense must be only a specialised function of the central sense. Apart from this criticism, however, I am now convinced that the above way of stating the relation between special and 'common' sense,

though in agreement with what I have already stated in my edition of *De Sensu* and *De Memoria* (Intro., pp. 14, 15), is somewhat misleading. It is impossible to take the central sense as a faculty of discrimination entering into all particular acts of perception and treating each special sense as its instrument. To Aristotle all sense involves both discrimination (κρίσις) and receptivity or experience (πάθος). In so far as any class of sensibles can be experienced and discriminated in independence of the others we have a case of special sense (ἰδία αἴσθησις); in so far, on the other hand, as there is any community between the various acts assigned to the separate senses, we shall possess a common sensibility. Now the determinations of magnitude, numbers, motion, etc., are experiences common to our several acts of sensation and hence are κοινὰ αἰσθητά. At the same time the discrimination of these from each other, of the qualities of any special sense from all others, and of subject from object (giving us the consciousness that we are conscious) is a common discriminative function, and hence must be assigned to a common sensibility. This we can call a 'central' sense owing to the fact that it implies the existence of a central organ into which all sensory channels discharge their stimuli. But the conception is really one formed by abstraction from the functions of the special senses and merely follows up the literal use of the word κοινός.

Further discussion of this matter will be reserved for the present. But here I might point out that Mr. Hicks has a new interpretation of the famous passage in III. ch. 7 (431 *a* 22 *sqq.*) where the question is raised of the difference between the discrimination of sensibles belonging to the same genus (*e.g.*, black and white) and that which distinguishes qualities not belonging to the same sense. Readers of the *De Anima* will remember that in an earlier passage (426 *b* 29 *sqq.*) Aristotle had found a difficulty in the explanation that the unity of the subject who discriminates two contrary sense qualities is paralleled by the unity of an object possessing different qualities. Where the qualities are contrary to each other no spatial unit can be qualified by both simultaneously; it is only potentially that the same thing is both black and white. Consequently the unity of consciousness is comparable rather to that of a point at which a line is divided into two segments; this point is *actually* single and diverse at the same time, according to the relation in which it is taken. Now M. Rodier, following Simplicius, gives an interpretation of the present passage according to which Aristotle here states that the perception of differents (*e.g.*, sweet and hot, or sweet and white) stands on the same footing as that of contraries. In virtue of the fact that two qualities like sweet and white are both positive they can enter into relation with each other. The sense to which they stand in this relation of positive will be one, just as the sense to which two qualities are both related as colours will be one. The result will be that, if we explain the unity of consciousness by the

unity of an object, the case of the unitary percipient of contraries will be shown to be not fundamentally diverse from that in which differents are discriminated; while, as is more likely, if we are satisfied with the explanation of the perception of contraries by the analogy of the point, we can explain the union of qualities in objects by the same principle. It is the continuity of physical bodies (not indeed their divisibility, as M. Rodier says) which explains how the same thing can be both black and white, and it will be in virtue of the same character (that an identical point can have different determinations) that the co-existence of heterogeneous properties in the same object can be accounted for.

Mr. Hicks, however, has a quite different interpretation. He reads 431 *a* 20-23 *τίνι δ' ἐπικρίνει τί διαφέρει γλυκὺ καὶ θερμόν, εἴρηται μὲν καὶ πρότερον, λεκτέον δὲ καὶ ὧδε. ἔστι γὰρ ἕν τι, οὕτω δὲ καὶ ὡς ὅρος. καὶ ταῦτα, ἓν τῷ ἀνάλογον ἢ τῷ ἀριθμῷ ὄν, ἔχει πρὸς ἑκάτερον, ὡς ἐκεῖνα πρὸς ἄλληλα.* He translates, 'What that is by which the soul judges that sweet is different from warm has been explained above, but must be restated here. It is a unity, but one in the same sense as a boundary point, and its object, the unity by analogy of these two sensibles or their numerical unity, is related to each of the two in turn as they, taken separately, are to each other.' Here he differs from M. Rodier in making *ταῦτα* the subject of *ἔχει*, reading *ἢ* instead of *καὶ* before *τῷ ἀριθμῷ*, and in making *ἐκεῖνα* mean *they* (*i.e.*, sweet and white) taken separately, whereas to M. Rodier *ἐκεῖνα* means the sensibles as qualities of objects. Thus what is proved will be merely that a union of sensations has after all a double aspect, hot-sweet being sweet relatively to hot, and hot relatively to sweet. Now this looks like a more straightforward way of taking the passage, and avoids the necessity of inserting *ἑκάτερον* before *πρὸς ἑκάτερον* as M. Rodier ought to do to get his sense of the passage. But there are serious difficulties remaining. First there is the forced interpretation assigned to *ἐκεῖνα*. Secondly the whole of the subsequent passage will be simply an application of the above principle, *viz.*, that a unity of sensations must have diverse aspects. It also makes Aristotle merely state without proof in the next sentence that there is no difference between the perception of contraries and that of differents, whereas the relation between the two had been left undetermined in chapter ii. above, and badly needed elucidation. Finally it is not precisely this principle that Aristotle needs to prove, but rather its converse, *viz.*, that different sensations, if perceived, must form a unity.

I should suggest that the weak point both in M. Rodier's and in Mr. Hicks's interpretation is the meaning assigned to *ἐκεῖνα*. Is it not likely that Aristotle (say in lecturing) began this passage with full consciousness that the subject as treated in chapter ii. had been left in an unfinished state. Recalling, and probably referring to the fact, that he had explained the simultaneous perception of

black and white, he now recurs to sweet and hot, heterogeneous sensibles, and declares that they also are related to each other as the contraries already dealt with (ἐκεῖνα) are. (This involves reading πρὸς ἑκάτερα with Simplicius or ἑκάτερον πρὸς ἑκάτερον.) Then, reaffirming this in general terms by implication in the next sentence, he goes on to prove his assertion much in the way that M. Rodier and Simplicius will have it. This suggestion, for which further arguments might be adduced, I offer as entailing less strain upon the Greek than others as yet set forth.

It would be impossible to do justice in short space to the many other suggestive interpretations which Mr. Hicks offers from time to time. I might point out that he seems to be in substantial agreement with Prof. Beare when he says that 'the fundamental meaning in φαντασία is presentation to the mind,' though he wisely refuses to employ 'presentation' as the technical equivalent of φάντασμα. The student will find much help in the notes in the chapter dealing with imagination (III. ch. iii.), with its perplexing distinctions between the various mental faculties.

(2) Coming now to those passages where Mr. Hicks does not so much introduce something fresh in his interpretation as decide between the various theories already propounded, I should select for comment first his treatment of the controversy as to the definition of the soul.

This is primarily a logical question. 'We must take care,' says Aristotle (I give Mr. Hicks's translation of 402 *b* 5-8), 'not to overlook the question whether there is a single definition of soul answering to a single definition of animal; or whether there is a different definition for each separate soul, as for horse and dog, man and God: animal, as the universal, being regarded either as non-existent or, if existent, as logically posterior.' This is connected by Mr. Hicks with the well-known Aristotelian doctrines: (1) that the universal is not substance ('non-existent,' thus meaning 'not a substance,' 'nothing real'), and (2) that the *infima species* alone is substance, and alone can, properly speaking, be defined. (I leave aside the question of the possibility of reconciling those two doctrines.) The meaning will then be that Aristotle asks whether soul is a specifically single thing with a single definition coextensive with the κοινὸς λόγος of animal, or whether it is specifically distinct in each case, as the species of animal are distinct, and soul the universal is a logical fiction just as animal in general is, and in fact all genera are. It is a pity that if Aristotle meant this, he did not exactly say it in this way, for certainly the way in which the question is raised here, together with the answer given in 414 *b* 20 *sqq.*, suggest that he had something further in view, as both Alexander and Zabarella thought. The way in which the question is put implies that, in some people's estimation at least, the κοινὸς λόγος of animal is εἷς λόγος, and that whether τὸ ζῷον τὸ καθόλου is 'nothing' or 'posterior' depends upon whether there is εἷς λόγος of soul or

not. Again, when in the subsequent passage the unity of souls is compared to the unity of figures and other classes which are constituted by a series, it does seem as if Aristotle had in mind the difference between different types of generic unity. In those cases where the unity is non-existent we have a class of things one only in virtue of a common name. Opposed to these we will have the case of co-ordinate species (such as horse and dog would have appeared to be to ancient biology). In this instance the universals, quadruped or animal, though not themselves substance, are at least constitutive of the substance, for the genus is ὕλη νοητή and requires only to be informed by the differentia to pass into substance. It is difficult to see why Aristotle would have gone out of his way to say that this was either 'nothing' or 'posterior' just at this point, for the sense in which this is true is a commonplace of all science and the task in hand is surely to find the precise sort of unity which may be ascribed to the genus 'soul'. (In Mr. Hicks's view, of course, the question at issue is as to whether soul is or is not a genus.) Lastly, we have the case where the universal might be described as posterior, *viz.*, that in which the members of the class form a series, each unit in which contains the previous one, as the quadrilateral includes the triangle, and three contains two. Now the members of such a series are distinguished from one another not as equal modifications of a genus which is a common substratum, and as ranging between two extremes (like the colours, on the Aristotelian theory) as in the case of a true genus. The difference between one species and another will depend upon their relative complexity, *i.e.* the extent to which the one has advanced beyond the other in the addition of unique differentiae to the primitive type. The conception in fact is that of a class showing development, and what Aristotle finds interesting is ultimately (as Mr. Hicks shows) not the series of souls but the series of exclusive differentiae, the nutritive, sensitive, appetitive, etc., *functions*. This series of functions will form a unity only by being πρὸς ἕν, and the souls possessing more or fewer of them will be only a γένος κατ' ἀναλογίαν. It is strange, I repeat, if Aristotle, realising so well this logical notion and employing it so notably in Book II., does not adumbrate the idea in his preliminary survey of the questions to be raised. Further, the question as to whether soul is specifically the same has been raised immediately before (402 *b* 1 *sqq.*), and Mr. Hicks's interpretation makes the present passage cover the same ground. Finally, the difficulties in which Alexander and Zabarella find themselves are not inevitable. The point of view from which ζῷον is regarded is altered in the same sentence. Animal is first put forward as a type of the true genus (it was in fact the stock illustration), and then Aristotle, remembering that ultimately the differences between animals will depend upon the differences between their 'souls,' suggests that perhaps, if ψυχή is not a true genus, neither will animal be so.

Another matter of importance, and this time a purely psychological issue, is the question of the directness or indirectness of the perception of *τὰ κοινὰ αἰσθητά*. In III. ch. i., 425 *a* 14 *sqq.*, Aristotle argues that there can be no special sense-organ corresponding to them, for in that case it would be possible to perceive them *κατὰ συμβεβηκός* by means of the special senses, just as one of these may perceive the objects of another (*e.g.* as sight perceives sweetness, through 'association' or 'complication,' as we should say), or as the object, *e.g.* a person, that manifests a sensible quality, *e.g.* white, is perceived indirectly. Now in spite of the fact that the minor premiss requisite to give the required conclusion is roundly asserted (425 *a* 28), *viz.*, that we do *not* perceive the *κοινά* indirectly, Mr. Hicks holds that there is after all a sense in which the special senses may be said to perceive the *κοινά* indirectly. Thus he retains the reading *ὧν ἑκάστῃ αἰσθήσει αἰσθανόμεθα κατὰ συμβεβηκός*, refusing to insert before the latter pair of words the *οὐ*, which nearly every one else who takes the sentence to express Aristotle's own opinion insists to be necessary. Mr. Hicks's chief reasons for taking up this position seem to be (1) that a determination belonging to the common sensibles, *e.g.* a particular magnitude which accompanies (*ἀκολούθειν*) a certain colour can fairly be called a *συμβεβηκός* of the colour or coloured object from the logical point of view; (2) that it is not *qua* sense of colour that sight perceives magnitude; sight perceives colour only, leaving it to the central sense to discriminate the 'common' sensible in the confused whole presented to consciousness. The special senses are then not *per se* percipient of the common sensibles. But from this point of view it might equally well be held that we perceive the special sensibles indirectly by means of the central sense, and *κατὰ συμβεβηκός* will mean only 'coincidently'. It seems strange that Aristotle, after employing the term in this sense, should immediately after go on to use it in the sense of 'accidentally'. He is at pains to deny that the connexion between the perception of magnitude and the perception of colour is accidental. The facts are, he says, that we have direct perception of the magnitude simultaneously with our apprehension of the colour; the one is necessarily implicated in the other as one special sense-quality is not implicated in another, or as a particular sense-quality does not necessarily imply a particular substance. Now to say 'we perceive the common sensibles incidentally by each special sense' has at least the appearance of being in contradiction with this doctrine.

Some less important points might be mentioned. Mr. Hicks gets into difficulties with the term 'indivisible' when Aristotle comes (430 *b* 6) to apply the distinction between 'potentially' and 'actually' to this. Now there is a distinct ambiguity in the Greek verbal adjectives in *τός*, an ambiguity which Aristotle clears up in the case of *αἰσθητός* in *De Sensu*, 6. The minute sensible is

in isolation only potentially sensible. The English termination 'ble' by which τός is rendered is itself ambiguous in another way. It sometimes corresponds, as in 'sensible,' to the actuality alone, and sometimes, as in 'divisible,' to the possibility only. The fact is that there are pairs of predicates, *e.g.*, perceived and perceptible, divided and divisible, separate and separable, the members of which are respectively ἐνέργεια and δύναμις. These are in Greek both rendered by the adjective ending in τός; hence the necessity for drawing the distinction. But the logical contradictions of these two terms are both possible and serviceable conceptions, for their use corresponds to two cases, the one, *e.g.*, undivided, implying the negation of only one of the positive terms (what is undivided may be divisible), while the other, *e.g.*, indivisible, entails the rejection of both. Now it is clear that Aristotle recognised that both those meanings could be signified by the negative of the verbal adjective, *e.g.*, in the case of ἀκίνητος (*Metaph.*, 1068 *b* 20 *sqq.*, τό τε ὅλως ἀδύνατον κινηθῆναι . . . καὶ τὸ πεφυκὸς μὲν κινεῖσθαι καὶ δυνάμενον, μὴ κινοῦμενον δὲ). Here the sense of the whole passage compels us to think that he is drawing the same distinction between the senses in which ἀδιαίρετος can be used. Mr. Hicks finds a difficulty in believing that Aristotle could have meant this, or that he really intended to say that τὸ ἀδιαίρετον is used with two meanings, ἢ δυνάμει ἢ ἐνεργείᾳ, for this implies the confusion of the potentially indivisible with the not potentially divisible. He might equally well have added that this identifies the actually indivisible with the not actually divisible. But there is an additional perplexity introduced by putting the matter in this way, Aristotle is not thinking here of the not potentially divisible at all. Surely if the distinction between δύναμις and ἐνέργεια drawn in the case of the positive term gives us the contrast between the divided and the divisible, there will be corresponding to these the undivided and the indivisible. The confusion of which Aristotle, according to Mr. Hicks, would be guilty, would be that of failing to distinguish between the indivisible (*i.e.*, the not potentially divided) and the potentially indivisible. This last conception literally expressed is that of 'the potentially not potentially divided,' and I hardly think that Aristotle would have conjectured that any one could take this meaning from his words, if he said that τὸ ἀδιαίρετον could be understood in the sense of being δυνάμει. In the very next line ἀδιαίρετον ἐνεργείᾳ is used as equivalent to 'not actually divided,' as there is indeed no possibility of drawing a distinction between 'actually undivided' and 'not actually divided'. From this it is clear that the opposed member of the antithesis is 'the not potentially divided,' or, as we should say, 'the indivisible'. But it should be noted that Aristotle is not so rash as to call it τὸ δυνάμει ἀδιαίρετον as apparently Themistius has done; no doubt he foresaw Mr. Hicks and his objection!

One or two minor points may be noticed. On page 368 we read

that 'according to *De Sensu*, 3439 *b* 8, all bodies have some measure of transparency on their surface'. It should have been pointed out that immediately above we find—*ἀλλὰ τὴν αὐτὴν φύσιν δεῖ νομίζειν, ἥπερ καὶ ἔξω χρωματίζεται, ταύτην καὶ ἐντός*. Again is it not confusing to call our simplest ultimate notions *τὰ ἀδιαίρετα, πρῶται οὐσιαι*, as is done on page 497, without any qualification, where *πρώτη οὐσία* has also a well-defined meaning quite different from this? (*Cf.* Bonitz, *Ind.*, 653 *a* 57 *sqq.*) Once more it is hardly accurate to say (as on p. 309) that what is form in one aspect may be regarded as matter in another. Rather what is concrete in one relation, *e.g.*, the organism, may be matter in another, *e.g.*, relatively to the soul; and what is form in one sense, *e.g.*, an *αἰσθητὸν εἶδος* may be concrete in another, *e.g.*, *τὸ εὐθύ* relatively to the concept of the straight line —*τὸ εὐθεῖ εἶναι*. Finally, I think Mr. Hicks might have extended his account of *ἀκρίβεια* so as to make it cover the case where the term is used in connexion with sense-perception.

(3) I come now to the all-important question, a matter on which, as I think, Mr. Hicks has been too brief, *viz.*, that of the relation of the Aristotelian psychology to that of the present day. It is obvious that until very lately psychology had made no real advance beyond the Aristotelian position. Spinoza, Descartes, and the early associationists might do some interesting enough introspective work, but in the relation of mind to body or of physiological changes to physical fact they have nothing fresh to tell us. When Spinoza asserts that in sensation we are as much aware of the nature of the body as of objects external to it we welcome this as a fresh metaphysical suggestion, but we fail to discover the scientific facts on which it is based. Clearly it does not matter much though the world has found out that the physiological events correlated with consciousness are activities of the brain and not of the heart, so long as people are in utter ignorance as to the real nature of such activities, and have moreover no inkling of the system which unites all physical processes, both those which are physiological and those which are not.

Now Mr. Hicks frequently talks as though modern psychology had transcended the Aristotelian doctrine in discovering that thought, in the sense of the highest intellectual activity, had a bodily organ, while this was denied by Aristotle, however ready he might be to adopt the psycho-physical standpoint in describing the other faculties. Yet Aristotle everywhere admits that human thought is accompanied by *φαντάσματα* and sensory images, which are always conditioned by, and seem ultimately to be, physiological processes. Consequently it would seem that when he declares that *νοῦς* is *χωριστός*, he by no means meant that thought *processes* can occur independently of the body. In fact all process is *κίνησις* of some sort and hence is a form of passivity, and therefore cannot be ascribed to the *νοῦς* which is *ἀπαθής*. On the other hand it is clear that this impassive thought is taken to be an element in the human mind.

The question, therefore, remaining to be decided is the twofold one, firstly, what justification has Aristotle for asserting that in the processes of human thought there is present a thought which involves no process, and secondly, what has modern psychology to say on such a subject?

Let us take (*a*) the former question. To Aristotle the νοῦς which is ἀπαθής and χωριστός is an agent. It actually produces something—obviously thought in us, the individuals. Of course a capacity for thinking is implied in us, and this is the intellect in potency—the νοῦς παθητικός. It may be said that our thinking—an occurrence in time—is the joint product of this capacity and this agent. Now that which is an agent must be real, a relatively (at least) permanent, self-maintaining thing, having an existence over and above any particular acts in which it manifests itself. How then, it may be asked, can we ascribe such a reality to νοῦς? Aristotle's answer is, I think, because it is τὰ νοητά, *i.e.*, the permanent intelligible system of the universe. The whole purpose of the contention that intellect is in a sense identical with its object has been overlooked by most people. The notion of active intellect would be quite shadowy and hypothetical, unless some character were assigned it which explained its ability to act. It would take too long to go into the question of a possible identity of thought and its objects. Aristotle does not need to assume that the *thinker* is identical with what he thinks. This is impossible, if the whole notion of an object consists in its being other than the being to whom it is an object. All Aristotle needed to maintain was that the object was the *content* of thought. From this point of view, thinking consists in the actual presence of an intelligible object in a particular soul, in virtue of what can be described only as the capacity in that soul for admitting the presence of the said intelligible object. But it might be said that the permanence and reality of objects consisted in their participation in ὕλη and that the doctrine which makes them the active cause of thought is materialism. But according to Aristotle, the νοητά, the entities forming the intelligible system of the universe, are only potentially present in the objects of sense (430 *a* 6-7). The permanence, therefore, of the objects which are the content of thought is not that of a material system. It is rather what we should call the permanence of the truth. But it is clear that this independence of time which it possesses is not to Aristotle a mere timelessness produced by logical abstraction. It is rather a real eternity as is proved, Aristotle thinks, by its forcing itself into the mind of the particular thinkers here and now. Thus for example the intelligible nature of some long past movement in history may enter the mind of a thinker now for the first time, thus proving that as an intelligible object it exists now and at all times, since it may at any time be thought of.

Finally criticism may ask if a permanent reality of this kind,

that of an intelligible system, is the only permanence which analysis reveals in the universe. It might be replied that intelligibility is not its only universal character, that it might also be described by, *e.g.*, æsthetic predicates, and this, besides its systematic and highly articulate character, would save it from being described as a mere 'ballet of bloodless categories'. Yet it will be said that this is mere Hegelian and Spinozistic intellectualism once again, that we wish for a more satisfying 'permanent' in the universe; but perhaps it is only the cognitive side of our nature that can be satisfied or comforted.

Coming to our last question, that as to the relation of modern psychology to this position, we find in correlating more precisely the mental and the physical modern science by no means requires us to think of mind as itself in process. Indeed, even in the field of sense-perception, our increased knowledge of the physical processes connected with it tends rather to further our recognition of the ideality of the object of consciousness and the dependence of the particular act of perception upon a consciousness transcending any particular act. If you take the Aristotelian theory that the sensible qualities of objects are transferred to the organs of the percipient and in so being transferred become known, then, if you omit Aristotle's important proviso (as so many have done), that it is only in perception that the qualities are actual, you have a crude realism hardly to be distinguished from materialism; the presence in perception is a mere accident that happens to the sense-qualities. But now we know that the physical events accompanying perception are one only in the sense of being continuous with each other, and that they fall into sections, *e.g.* the literally 'physical' and the physiological, which are heterogeneous from each other. We know also that while the act of consciousness occurs at a particular point in the latter section of the total series, it is only in virtue of this act and its qualitative character that the physical world and any series of events in it can be thought of or described. My acts of perception, revealing to me light, number, extension, motion, etc., are the *prius* of the whole extended, changing, illuminated, etc., world, in which I detect the very changes that produce those acts. That is to say, the *αἰσθητὰ εἴδη* exist only potentially outside the act of consciousness. True, Aristotle reminds us in the *Metaphysics* (1010 *b* 30 *sqq.*) that the *ὑποκείμενα* of the sensible qualities exist independently of the act of sensation. Nevertheless, we find later on (1039 *b* 27 *sqq.*) that sensible objects in so far as incapable of definition and demonstration are themselves mere potentialities. The ultimate reality on which we are driven back is the conceptual scheme by which the world is thought. That is to say, the ultimate reality is the object of *νοῦς*—*τὰ νοητά*, and these, we are reminded (432 *a* 5), are present in the *εἴδη* given to us in sensation.

Now, suppose that modern physiological psychology were so

successful as to discover not only the cortical areas, with the stimulation of which the perception of the various qualities of special sensation is exclusively correlated, but also particular regions peculiar to the apprehension of what are styled the categories, *viz.*, unity, substantiality, causality, etc., the idealistic position would in nowise be undermined. Scientifically it would be satisfying to have a physiological chart as minute as possible of the correlates of mental function, and the making of it would probably aid the introspective analysis of mind. But when made it would only illustrate more effectively the absolute priority of the mind for which such a chart alone is real. The absolute impossibility of extracting the notion of substance, equally with that of red, out of any cortical material will show only the more clearly what the explanation of the correlation between neural and mental elements is. The notion, whether sensuous or conceptual, is itself not relative to or produced by any physiological process or substance; the act in which the individual employs it *is* dependent on a physiological event. But this dependence seems to have come about solely in order that the individual may react appropriately to a world of which he is conscious. The actual disposition of the neural elements themselves seems to be relative to the appropriate action ensuing on their stimulation; take, for example, the case of sight-perception where the congruence of particular nerve-fibres seems to be relative to this purpose alone and in no way corresponds to the unity of the perception (*cf.* Sherrington, *The Integrative Action of the Nervous System*, Lect. X.). I am conscious, therefore, because I am mind, which is always conscious; and I am conscious now and in this way, because I am a body descended from organisms for which it was profitable that under certain circumstances such an act should occur. Finally 'we do not remember,' *i.e.* the transcendent activity of mind is no part of the individual's mental history, because it (mind) is 'impassive,' *i.e.*, past and present—alteration, by which we date things in time, cannot be ascribed to it, and further (I disagree with Mr. Hicks, in thinking that the force of the ὅτι must be carried on to ὁ δὲ παθητικὸς νοῦς φθαρτός), because the individual's capacity for thinking is not only fleeting (something with a temporal history), but cannot be exercised without his sharing in this transcendent activity the existence of which is not temporal.

I have tried to show that modern psychology, far from negativing any theory of νοῦς χωριστός, rather strengthens an idealistic doctrine of the kind which Aristotle has so vaguely sketched. On the further question of the relation of the creative intellect to the mind of God, Mr. Hicks has done little more than state the conflicting opinions of the various commentators. He might, I think, have given us a succinct survey of the statements in the *Metaphysics* and elsewhere as compared with those here. He might also have pointed out the difficulty in identifying an intellect which thinks the

forms of sensible things with that of a transcendent being outside the world of change and decay, unless, indeed, the physical transcendence of God is to be taken merely as an analogue to the immateriality of νοῦς and νοητά generally.

Finally, I should add that I should have liked to have seen a discussion of Aristotle's doctrine of the ἀπάθεια of intellect, by means of which he excises all the difficulties which modern philosophy finds in the relation of subject and object. Mr. Dawes Hicks, in a recent paper, has stated the problem well in the case of sense perception. If A, the object, produces an effect $\beta$ (the knowledge of A) on B, the subject, $\beta$ must to some extent be qualified by the nature of B, in which it exists. That is to say, the nature of A will be distorted by the subjectivity of B in the act of knowing. Now, the Aristotelian theory is that the act of knowledge gives us the object as it is, that the nature of B is that of a pure potentiality receptive of the object as it is, and suffering no alteration other than that of being raised from being potentially conscious to being actually conscious. That is to say, the relation of object and subject is not strictly comparable to that of agent and patient. And we might justify this by pointing out that, relatively to a subject as conscious, A can have no other nature than to be known. No character of A can be stated which is not incorporated in $\beta$, so that A relatively to B *is* $\beta$. Or we might say that the only distortion which A suffers in producing knowledge in B consists in becoming something to be known. But an object as capable of being known (and we cannot *know* that any others exist) does not suffer any distortion in being known. Since no existence can be imputed to A which is not $\beta$, we cannot say that A is altered in being $\beta$; the patient does not react and so modify the agent.

To put the matter otherwise, if the whole existence of the universe is qualified by a reference to a subject, there is nothing specially subjective (*i.e.* altering its objective character) in the acts by which it comes to be known; these do not present it as other than it is. But the question of the subjectivity of secondary qualities is quite diverse from this. For if these only characterise the world as it is when certain relations between physical bodies (an 'object of sense' and an organism) exist, then they will be true of the world only as it exists under these conditions, and they will be subjective in the sense that they do not give us the world as it exists in other ways, and since (as Spinoza said) they reveal to us the nature of our own bodies as much as that of the spatially external things affecting our bodies.

It remains for me only to thank Mr. Hicks once more for this masterly and consummate work which has proved to me, as no doubt it has to others, a most stimulating study.

G. R. T. Ross.

*The Life and Letters of Herbert Spencer.* By DAVID DUNCAN, LL.D. London: Methuen & Co., 1908. Pp. xvi, 621.

DR. DUNCAN explains in his Preface that the publication of a Life of Spencer so soon after his Autobiography is in fulfilment of a promise made by him in 1893. The first sixteen chapters necessarily cover the same period as the Autobiography, that is to say, from 1820 to 1882; but the remaining chapters, more than half of the book, constitute the only authoritative record of the latter part of Spencer's life. There are five portraits of him taken at various ages from nineteen to seventy-eight, which exhibit a remarkable progressive development of the head and features from not very noticeable beginnings. To the last there remains an incongruity between the upper and lower portions of the countenance that may well have suggested some of the reflexions that occur in his Essay on *Personal Beauty.* Other illustrations are some portraits of Spencer's early friends taken by himself, and showing considerable distinction of draughtsmanship; and there are photographs of several scenes associated with his memory. Among the Appendices there is a paper by Spencer on his own *Physical Traits and Some Sequences,* and another on *The Filiation of Ideas.* In the latter he gives us an account of the order in which his theories occurred to him, how they grew and propagated themselves from germinal suggestions, and how circumstances sometimes by a fortunate concurrence favoured their growth. It is an extremely interesting and important paper, and might, I should think, be inserted with advantage in future editions of *First Principles,* as a general Preface to the Synthetic Philosophy.

Nothing astonishes the academic student of Spencer's life more than the irregularity of his education. From his father and uncle he acquired elementary mathematics, a sense of the importance of a correct, clear and forcible style in composition, the art of sketching from nature, a good deal of miscellaneous information about natural objects and social affairs, and "the habit of regarding everything as naturally caused"; but barely the rudiments of Latin and French, and "it is surprising how little stress was laid by either father or uncle on general reading" (14). From 1837 to 1848 he followed the profession of a railway engineer, except that between 1841 and 1844 he attempted in vain to push his fortunes in literature. Meanwhile he continued the study of mathematics, made some observations in geology, and busied himself with some mechanical inventions which on the whole were unsuccessful. There seems to have been no reason why he should not have attained distinction as an engineer; but increasing interest in politics and intellectual speculation of every kind drew him away, and in 1848 he became sub-editor of the *Economist.*

To the ordinary student, then, he seems to have made poor preparation for the writing of a comprehensive and powerful work on

the foundations of morals and politics ; yet *Social Statics* appeared in 1850. At pages 417-419 there is an instructive correspondence upon this subject. Leslie Stephen, writing to Spencer (1st July, 1899), is sure that when he first published books upon ethical questions he " had somehow or other attained an amount of knowledge upon such topics very much superior to that of the average 'honour man'". Spencer replies : " Your assumption is a very natural one, but it is utterly mistaken " ; and he goes on to say that he had not then read Locke, or Bacon (save his *Essays*), or Hobbes, or Paley, or Bentham. At twenty-three he had read with approval Mill's criticism of the syllogism ; at twenty-four " I met with a translation of Kant and read the first few pages. Forthwith, rejecting his doctrine of Time and Space, I read no further. My ignorance of ancient philosophical writers was absolute." " If you ask how there comes such an amount of incorporated fact as is found in *Social Statics*, my reply is that when preparing to write it I read up in those directions in which I expected to find materials for generalisation. I did not trouble myself with the generalisations of others. And that indicates my general attitude. All along I have looked at things with my own eyes and not with the eyes of others." " My own course—not intentionally pursued, but spontaneously pursued—may be characterised as little reading and much thinking, and thinking about facts learned at first hand." He describes himself as " constitutionally idle," " an impatient reader ". If he began to read any systematic work and disagreed with its main principles, it was immediately laid aside.

When Spencer says that he looked at things with his own eyes and thought about facts learned at first hand, he is not to be understood to mean that he actually himself observed them, but merely that in dealing with the reports of others he considered only the facts they reported and not their opinions about them. For he tells us (pp. 562-563) that the only case in which he can remember having been led into experimental research occurred in dealing with the circulation in plants : the results of which were published in the *Transactions of the Linnæan Society* (1866) and appear in the *Principles of Biology*, v., ii., App. C. In preparing to write the *Principles of Sociology* he obtained the aid of a number of friends to collect the immense mass of materials requisite for that work.

As every man has his own way of working, it would be absurd to complain of Spencer for pursuing his way. Nothing can be more ludicrous than the notion sometimes entertained by second-rate specialists, that there is some legitimate road to knowledge or to discovery, which they call 'going through the mill,' and that, except by traversing that road, you have no right to know anything or discover anything. No doubt Spencer's method of 'reading up' a subject under a preconceived hypothesis laid him open to certain dangers : the basis of fact obtained by such means is likely to be too selective and insecure. Darwin says of vol. ii. of the *Biology* in

a letter to Hooker: "It is wonderfully clever and I dare say mostly true. If he had trained himself to observe more, even at the expense, by the law of balancement, of some loss of thinking power, he would have been a wonderful man" (p. 125). Darwin was, no doubt, sensible of a certain thinness in the groundwork. Still, writing to Spencer, he says (p. 150): "I was fairly astonished at the prodigality of your original views [in the *Biology*]. Most of the chapters furnished suggestions for whole volumes of future researches." Should such chapters have been left unwritten because Spencer had not been 'through the mill'?

Another danger of Spencer's method was that his preconceived ideas might overpower the evidence collected to verify them, if they should prove to be in conflict with the facts; but in a very remarkable case they were not suffered to do so. If any doctrines were dear to Spencer they were the political prejudices of his youth; but the inductive studies preparatory to writing the *Principles of Sociology* compelled him to modify many of them. "In youth," he says, "my constitutional repugnance to coercion, and consequent hatred of despotic rule, had involved a belief like that expressed in the American Declaration of Independence, and like that which swayed the French at the time of the Revolution—the belief that free forms of government would ensure social welfare. A concomitant was a great abhorrence of slavery, and a conviction that it has always been an unmitigated evil. Ecclesiasticism, too, excited in me profound aversion. Along with this went an unhesitating assumption that all superstitions are as mischievous as they are erroneous. These and allied prejudgments were destroyed or greatly modified by contemplation of the facts. So that many ideas now set forth [in the *Princ. of Sociology*] were not affiliated upon preceding ones, but generated *de novo:* some independent of, and some at variance with, preceding ones" (p. 569).

Spencer, then, sometimes proceeded by direct induction, but his general method of thinking he describes as "allowing some germ of thought, accidentally occurring, to grow by accretions until it became a fully developed hypothesis". "A germinal idea thrown among unorganised materials sets up organisation." A "working hypothesis soon caused such knowledge as I had to take shape, and gave the power of rapidly assimilating other knowledge" (p. 542). Germinal ideas did their work in his mind with extraordinary rapidity; but as they were not always sound the tissue of argument that resulted was not always healthy. Mr. Francis Galton contributes (p. 502) an amusing story of an extemporary dissertation of Spencer's upon finger prints, so beautiful that it deserved to be true, but which unfortunately involved the assumption that the sweat ducts open between the ridges and not along their crests. This, however, does not hinder Mr. Galton from warmly appreciating Spencer's "magnificent intellect". "The power of Spencer's mind that I most admired," he says, "was that of widely

founded generalisations . . . he was always ready to pour out a string of examples. . . . In more than any other person whom I have met, did his generalisations strike me in the light of true composite pictures." It may seem odd that, in spite of such fertility in examples, he should have complained of a defective memory; but of course it was the rote memory of words, or of facts in arbitrary relations, that was wanting: in their natural and logical relations, under the stimulus of a general idea, all the relevant facts that he had ever learned surged up in his mind. His thinking was usually effortless and pleasurable; and he encouraged himself in sauntering and lounging, under the belief that idleness is favourable to the free play of ideas. So it is with some people; and those who are always careful and troubled about usefully employing their time may as well recognise that there is another and perhaps a better way.

One characteristic of genius is to be a state of release from the bondage of customary and conventional thinking: I have heard it described as having a 'loose mind'. There are several ways of attaining this condition, such as intoxication and absorbed attention. In hypnosis we see that, all distraction being shut out, men may perceive and remember better than in a normal state, and act a part better, because when awake they cannot act their best for fear of what others will think of them. Sometimes a whole generation, so far as it is open to the influences then favourable, experiences this release, and lives above itself. Such a time was the eighth decade of last century. Consider how much better the monthly magazines were then than they are now. I am glad to have been young in those days, when the new scientific ideas were at the height of their power. But men cannot live long at such a level; they soon fell back upon that futile fumbling with concepts that generally passes for metaphysics, and (as after a revival of religion) tradition reasserted itself. With Spencer the state of release resulted from his independence of character. In thinking he was under no inhibition of authority, for he was constitutionally incapable of recognising any such thing. At the age of twenty he bought Lyell's *Principles of Geology*: "The result of reading this was that, rejecting his adverse arguments, I adopted the hypothesis of development". So it always was. What the authorities thought, and what the sub-authorities therefore thought that he ought to think, he did not care, or even did not know. His ideas ran their course by a sort of internal fatality; and I think that they kept him alive until the cycle of them had closed. In tracing his ancestry what pleased Spencer most was to notice the independence of character that had brought religious refugees to England and kept most of his relatives in nonconformity.

Spencer's tenacity in insisting upon the originality of his doctrines, especially as against Comte and Darwin, may be hardly consistent with the theory of evolution. Here, he may be construed

to say, in this collection of molecules, not very lovely or even significant perhaps to you, but even here that *latens processus* took place for the first time which was correlative with such or such ideas. Not the world's self-knowledge, then, but the individuals, plasticity, however mysteriously inherited, seems to be the interesting fact. In defence of this attitude it may be urged, that it is a question of truth whether an idea first occurred here or there; or, again, that conventional rights of property in ideas ought to be respected. And so they ought, no doubt, by others: but ought the man of genius to be so blinded by this convention as to assert it at the cost of a night's sleep? Well, we must be tolerant toward "the universal passion". Watch the men or women in the street, and you will soon be convinced that, did they not think more highly of themselves than they ought to think, the world would soon come to an end. 'Why,' Humility might say, 'why should I beget my like?' Why, indeed!

Spencer's neglect of philosophical reading would seem to me excusable enough (for let each man go his own way) if he did not sometimes pretend to quote and refute his predecessors under the most palpable misconceptions. He seems never to have reflected that an author's opinion is as much a question of fact as the circulation in plants, and can only be discovered by extensive observation and induction. The inquiry is often obscure and difficult; but if we do not find it interesting enough to be carried out, we ought to refrain from assertions upon the subject.

As soon as Spencer began to express his characteristic ideas, they caught the attention of intelligent readers, and after a short period of latency his reputation spread far and wide: it seems to have culminated in the later seventies and earlier eighties. How general the interest in him became is described by Lady Courtney (p. 497). Farmers and clergymen, scientists and statesmen shared the excitement. In America his fame was propagated by the unflagging devotion of Dr. Youmans. In foreign countries there were admirers innumerable. The Chinese ambassador thought he ought to be made a duke. The Japanese consulted him upon their new constitution, and received very conservative advice. Dr. Duncan observes that the difficulty of estimating Spencer's place in Philosophy and Science follows from the very success of his teaching: the rapid assimilation of his ideas gives to his own pages an air of the commonplace. The same thing is noticeable with Locke and Rousseau. But some of us are old enough to remember the first effect of his writings. I shall always recall with gratitude the delight of reading, when an undergraduate, *First Principles* and the *Principles of Psychology*; and, in my judgment, his work is at present much undervalued.

CARVETH READ.

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*The Philosophical Basis of Religion. A Series of Lectures.* By JOHN WATSON, M.A., LL.D., Professor of Moral Philosophy in Queen's University, Kingston, Canada. Glasgow: James Maclehose & Sons, 1907. Pp. xxvi, 485.

THIS is a work of considerable importance as an index of the present position of philosophical thought on the fundamental questions of religion, and as containing suggestions of the directions in which advance may be sought. Prof. Watson is, of course, already well known as one of the leading disciples of Dr. Edward Caird; and it is hardly necessary to state that in standpoint, method and style his present work, like previous ones, constantly recalls that of his master. It cannot fairly be urged, however, that this amounts to a defect in his treatment of the subject. Prof. Watson is certainly not one who is ever likely to swear by the words of any master. He is an independent thinker, with an unmistakable individuality of his own. In general it may be said that his work is distinguished from that of Dr. Caird by greater definiteness on points of detail. While the writings of the master have an inimitable breadth and wealth of thought, and appear almost to overwhelm all difficulties with the sweep of their masterful eloquence, those of the disciple are characterised rather by the constant effort to deal with the various difficulties, point by point, as they arise. This gives them a considerable advantage, especially from the point of view of the young student who is anxious to know exactly where he stands; and it may indeed be doubted whether the student of the philosophy of religion could find any better work than the present as an introduction to the speculative discussion of the subject. It is thoroughly capable and well informed on all sides, thoroughly fair in its references to divergent positions, and yet at the same time quite definite and unambiguous in its general conclusions—or at least so definite in general, that any lack of definiteness on particular points is readily apparent.

The plan of the work may be briefly indicated. It consists of a series of seventeen lectures, the first seven and the last two of which are mainly occupied with philosophical discussion, while the other eight are largely historical. The chief subjects dealt with in the more historical parts are Philo and the New Testament, Gnostic Theology, Augustine, Mediæval Theology, Leibnitz and Protestant Theology. Even in these historical chapters the chief object of the writer is to bring out the philosophical significance of the views discussed; and they may be regarded as supplementary to the similar treatment of earlier views in Caird's *Evolution of Theology in the Greek Philosophers*. The account of St. Augustine is particularly interesting and valuable. For readers of MIND, however, the general philosophical discussions will naturally have the greatest interest; and in what follows I intend to confine my attention to these.

Prof. Watson begins by stating that religion is at once a life, a creed and a ritual; and that, as any one of these constituents may be accentuated, there are three main types of religious philosophy. His book is, however, almost entirely concerned with the middle type. The place of ritual is not dealt with; and religion as a life is considered only in so far as scepticism with regard to creeds tends to throw men back upon the moral consciousness as the only real basis of religion. On the other hand, almost every conceivable foundation for a creed is considered by Dr. Watson; and the most valuable element in his work is probably to be found in his careful discrimination between a number of different points of view, which are often closely related to one another and in some danger of being confounded. The chief points of view that thus come up for consideration are that of Authority, Personal Idealism, the New Realism, Agnosticism, Scepticism, Pragmatism, Absolutism, Mysticism, Pantheism, and what Dr. Watson describes as Constructive Idealism—his own point of view. In his discussion of these the most interesting points are perhaps, on the one hand, his treatment of the recent views of Pragmatism and the New Realism, and, on the other hand, his distinction between Constructive Idealism and Personal Idealism, Absolutism, Mysticism, and Pantheism.

His criticism of Pragmatism is chiefly contained in a Note to the sixth lecture. It is stated in a condensed form, but is very clear and convincing; and it has the great advantage of giving full recognition to the elements of truth contained in the Pragmatist position—a recognition, indeed, which it is not very difficult for a writer of Dr. Watson's school to accord, since these elements of truth have always been a good deal emphasized within that school. The following passage may be quoted as summing-up one of the most important contentions. 'An idea is not "*made* true" by its satisfactory consequences, but it has these consequences because it is true. It would be passing strange if in a rational universe our fundamental needs were incapable of satisfaction; and as the desire for truth is one of those needs, and admittedly one which is essential to the satisfaction of the others, it is not surprising that when we hit upon an idea which agrees with the totality of our experience, we should experience the joy of a fulfilled desire. And as our experience is continually growing, we can also understand how it comes about that a partial truth, taken as the whole, should lead to dissatisfaction when it is found to be incompatible with our wider experience. In a sense, therefore, no single judgment is absolutely true; nevertheless, judgments are true in so far as they involve and conform to the principle of the whole; and when a judgment which has been accepted as final and complete is seen to be only a partial determination of reality, it does not follow that it loses all its truth, but only that it is absorbed in a wider truth.'

The New Realism is discussed in the fifth lecture; and it also is

criticised in a way that is both sympathetic and incisive. If the criticism is in this case somewhat less conclusive than in the case of Pragmatism, this is probably due to the fact that the point of view of the New Realism is more difficult to subvert except by means of a constructive theory of reality. And it is, in truth, by means of such a constructive theory that Dr. Watson seeks to overthrow it. Hence the success of his criticism is in the end dependent on the value of his constructive theory. Even apart from this, however, I think he is successful in bringing out several weak points in the doctrines of the New Realism. His contention, for instance (p. 120), that 'realism is merely an arrested solipsism,' is well enforced. Again, he urges with much force (p. 124) that 'if the realist were right in supposing that "ideas," in the sense of "images," were the sole object with which the mind operates, it is easy to show that no true judgment could possibly be made. An image is necessarily particular and transitory, and therefore cannot have a universal application. But, when we judge that two and two are four, we do not mean that the images of two and two and the image of four are the same image (which is obviously untrue): what our judgment means is, that these or any other two units added to other two are four; and this judgment presupposes the comprehension by thought of an absolute or unchangeable arithmetical system'.

Personal Idealism is also dealt with in the fifth lecture, where special reference is made to the views of Dr. Hastings Rashdall; and it is rightly urged that 'Personal Idealism is in its fundamental principle akin to the Subjective Idealism of Berkeley and Leibnitz; while Speculative Idealism is based upon the principle that the universe is a rational system, which cannot be resolved into a mere assemblage of separate individuals. The former maintains that nothing is real but what exists in the form of ideas in this or that individual, while the latter claims that the whole conception of individuals as confined to their own subjective state is a fiction.' All that Dr. Watson says on this subject seems to me quite admirable; and his contentions here, in view of the prevalence of subjective tendencies in recent philosophy, are specially deserving of attention at the present time.

Mysticism and Pantheism are well discussed and distinguished from Constructive Idealism in the sixteenth lecture; where it is pointed out that 'there is a marked distinction between Mysticism and Pantheism, due to a fundamental difference in their attitude to the universe. The God of Mysticism transcends the world as far as the Infinite transcends the finite; the God of Pantheism is immanent in the world, or rather the world is immanent in Him. It is just because the mystic conceives of the world as essentially partial and limited, that he refuses to admit that the Infinite is contained in it. But Pantheism consists essentially in the doctrine that the finite as such has no reality, while yet it is real when it is

viewed as it truly is, *viz.*, as a phase of the Infinite, which is present in every part of it, and in every part with equal fulness.'

The criticism of these various theories makes the true meaning of Constructive Idealism more apparent. Dr. Watson is particularly careful to distinguish it from anything that could properly be described as Absolutism. 'It abolishes no distinction,' he explains (p. 135); 'what it does is to maintain that every distinction, even the most minute, if only we could trace it out to its ultimate source, would be found to be inseparable from the whole spiritual reality, and even in its immediate form reveals, though in a vague and indefinite way, the principle of the whole. Hence as we ascend in the scale of being there is an ever clearer manifestation and realisation of the divine unity; and in man, of all the finite beings we know, that unity is most clearly manifested and most definitely apprehended. The whole movement of human history, in fact, is nothing but the increasing comprehension of what nature and man are, when brought into connexion with the principle immanent in all things.'

It is evident that the working out of a view of this kind must involve a very careful consideration of the relation between finite and infinite, time and eternity; and it is easy to see that Dr. Watson has thought a great deal about these relations. 'Constructive Idealism,' he says (p. 438), 'claims that no device is needed to unite the finite to the Infinite, because they have never been, and cannot possibly be, separated. From all eternity and to all eternity, the world is the self-manifestation of the Divine, and their supposed separation is due to the dualistic modes of thought inevitable in us, with our immersion in the particular and our concentration on special tasks.' And, with regard to time, he says (p. 128) that 'the series of events of which we have experience is not a mere series, *i.e.* is not an absolute transition from one state to another, but is really a succession of what is not successive. The changes in the world, in other words, are not absolute transitions. There is no break in the continuity of the world-process. It is the same world which persists through all the changes; and were it not so there would be no changes. If this is admitted, it is obvious that there can be no absolute origination or decease. . . . The appearance of life and consciousness upon the earth cannot have been their absolute origination; in other words, the primitive nebular matter must be conceived as involving, for one who grasped what it implied, all that comes out of it. . . . The rise of life in the organic world and of intelligence in man is but the gradual manifestation and comprehension on their part of the ultimate principle which gives meaning to all that is, and without which nothing that is could be.'

It is, however, in these more constructive aspects of his work that I find Dr. Watson's statements least satisfactory. It is not easy to discover what he really means by the Infinite, or what its

exact relation to the finite is. On page 19, for instance, he says that 'to claim knowledge of the Infinite is not to claim infinite knowledge. To say that 3 + 2 = 5 is certainly not to assume complete knowledge, and yet, if the judgment is true at all, it is true for all intelligences and at all moments, and in that sense is a knowledge of the Infinite.' But if this is what is meant by a knowledge of the Infinite, then it would seem that, if we could prove that all reality is finite, the knowledge of that would be knowledge of the Infinite. I find also a similar lack of definiteness with regard to the relation of time to eternity. The statement quoted above, that the series of events 'is really a succession of what is not successive,' seems little more than a self-contradiction. We want at least some very definite explanation of the sense in which there is and the sense in which there is not a real succession. The only thing that can be said in Dr. Watson's defence here is, that if he has not made this point clear, perhaps no one else has been much more successful. His statements with regard to human freedom, especially in relation to the problem of evil, seem to me to suffer from a similar lack of definiteness. He says (p. 459) that 'the freedom of man necessarily implies freedom to will evil, *i.e.* to seek for the realisation of himself in that which is contradictory of his true nature. Here . . . we have at once the explanation of evil and of its compatibility with the absolute perfection of God. There is no evil except for a rational being, who is capable of willing a good which he identifies with the absolute good, but which is in reality in antagonism to it.' And again (p. 462), 'man must be capable of self-will, *i.e.* of seeking his good in isolation from others, and therefore in violation of the promptings of that higher self-consciousness which is a witness to the true nature of things. A rational being cannot be forced to be good. He may, indeed, be made to conform externally to what is imposed upon him, but his will is not thereby turned to the good, but, on the contrary, it suffers a degradation from which it may be hard to recover. A free subject cannot be made good even by the power of omnipotence, and therefore the spiritual life is essentially a free and self-determined life. The self-revelation of God in and to man is correlative to man's free self-identification with God.' But does Dr. Watson mean to imply that man is 'willingly deprived of the good'? Or does he mean that man is necessarily deceived with regard to the nature of his true good? I can hardly suppose that he means the former. But if he means the latter, what is the source and what is the necessity for this deception? I do not find any clear and definite answer to these questions. Personally I believe that they could only be answered by means of a much more searching examination into the meaning of the Infinite, the meaning of process, the meaning of freedom, and the meaning of good and evil, than any that Prof. Watson has here supplied. Even with regard to the exact meaning of Con-

structive Idealism, his statements do not appear to me to be always as clear as one could wish. The statements, for instance (p. 81), that the world 'exists only by the activity of our minds,' or (p. 84) that the 'real world' 'exists only for a rational or intelligent subject; and if this subject is left out of account, it vanishes away'—are statements that seem to me to require a good deal of explanation. As they stand, they come perilously near to 'Subjective Idealism'.

My general view of the book is that it is decidedly good on the critical side, and that is also highly suggestive, but somewhat indefinite and inconclusive, on the more constructive side. In further criticism of the work, I may say that it suffers a good deal from a certain lack of coherence and completeness. The lectures of which it is composed did not originally form parts of a single course; and they do not appear quite to fit into one another, so as to constitute an organic unity. It is not always apparent why certain writers are selected for treatment, and why topics are taken up for consideration in one particular order rather than in another. I cannot but think also that it is a serious blemish in a work dealing with religion in a comprehensive way, and approaching it to a large extent from a historical standpoint, that the references are almost entirely confined to Christianity. The book is, however, one that will certainly be found extremely useful by students; and no doubt it will pass through several editions. I venture, therefore, to express the hope that in future issues an attempt may be made to give it a somewhat more complete and systematic form. It is one of those books of which it may be said that it is so good that one cannot help wishing that it were better.

J. S. MACKENZIE.

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*Geschichte der griechischen Philosophie, gemeinverständlich nach der Quellen*, von Dr. A. DÖRING, Leipzig: Reisland, 1903. Vol. i., pp. xi, 670; vol. ii., pp. vi, 585.[1]

EXTERNALLY, this book is distinguished from other histories of Greek philosophy by having no notes either at the bottom of the page or elsewhere, and by containing no words printed in Greek type. All references to authorities which seemed necessary are given in the text within brackets, and even such a term as the familiar *οὐσία* appears in the rather questionable shape of usía. This is because the author was determined to be *gemeinverständlich* at all costs. Whether he is right or not in supposing that it will make his book accessible to "quite new circles" (*Frauen Arbeiter*, vol. i., p. iv.), it is not for a foreigner to say; but there is no doubt room for an exposition of this perennially interesting subject which

[1] This work was not reviewed on its first appearance, and is now noticed at the Editor's request. The price has been reduced from 20 M. to 12 M.

shall be free from needless technicality and accumulated erudition. Such a work, however, can hardly be international, and even a translation of it might be misleading. What we have to consider here is only the intrinsic value of the author's contribution to the subject.

It will be best to begin by stating his main thesis. It is, that all philosophy, and especially Greek philosophy, is a "doctrine of goods" (*Güterlehre*). Its main problem is that of the "end of life" (*Lebensziel*), and the "conduct of life" (*Lebensführung*) which leads to Happiness. It is essentially a theory of "values"; it is really "axiological" from first to last.

This thesis strikes me as a combination of a very important and commonly neglected truth with a rather serious and widespread error. It was really high time that the current view of Greek philosophy as in some special sense "intellectualist" should be challenged, and the mere fact that it has proved possible to write two bulky volumes on the opposite assumption may help to right the balance. It is, I believe, the simple truth that, to the Greeks, philosophy was always and above all things a way of life. Even to Aristotle, the most "theoretical" of them all, the problem of philosophy does not present itself in an "abstract" form. The question he asks is: "Man being what he is, what life will most fully satisfy him?" If he comes to the conclusion that it is the life of θεωρία, that is because he takes a certain view of human nature. He may be an "intellectualist" in some sense, but he is so on strictly "humanist" grounds.

Dr. Döring is right too, I believe, in the view which he maintained in an article written some fifteen years ago[1] as to the origin and primary meaning of the *word* φιλόσοφος. It is a Pythagorean term, and is connected with the view of science as a καθαρμὸς τῆς ψυχῆς so eloquently expounded in the *Phaedo*. The Platonic ἔρως is a natural development of these ideas, which were operative to the very last. To the Greeks, philosophy is a religion and not a dogma.

It is quite another thing, however, to say that reflexion on the end of life is the true content of Greek philosophy. The "philosophic life" must have a more concrete filling than that; and the mere fact that, in the post-Aristotelian schools, the theory of the τέλος or end of life, with its subordinate problem of the κριτήριον of truth, came to occupy practically the whole field, is surely a sign of decadence rather than progress. The word "intellectualism," if it is to be used at all, ought surely to mean just the substitution of reflexion upon an experience for the experience itself. It is, I should say, "intellectualism" to discuss the end of life instead of living; and, in this sense, the philosophy of the post-

[1] *Archiv für Gesch. der Phil.*, v., pp. 505 *sqq.* *Cf.* my *Early Greek Philosophy* (2nd edition), pp. 107 *sqq.*

Aristotelian period appears to me fundamentally intellectualist. The Stoics are only consistent in holding that the life of the Wise Man cannot be realised on earth, and the Epicureans in denying all family and social ties. The everlasting discussion of an end which can never be attained is what characterises this period, and is surely the triumph of "intellectualism" and "other-worldliness". The amiable inconsistencies of individual philosophers only bear witness to the fact that human nature cannot be wholly suppressed.

Now of course Dr. Döring knows all this quite well, and it keeps coming out all through his book; but he is hard put to it when he tries to fit it into the current view which makes Plato intellectualist and the post-Aristotelian schools practical. He is singularly candid on the subject, and he makes it quite clear that his view can only be accepted on a certain hypothesis. According to this, it was Eudoxos who first realised clearly the true object of philosophy (vol. ii., p. 5), and this shows that Plato did not write the *Philebus*, which deals with the controversy between Speusippos and Eudoxos. It must, then, be the work of a nameless member of the Academy, though probably written during Plato's life-time (*ibid.*, p. 21). Now I am quite willing to admit that the *Philebus* deals with the views of Eudoxos and Speusippos, and I have indicated elsewhere that this accounts for the prominence given to these in Aristotle's *Ethics*. The *Ethics* is very dependent on the *Philebus*, or rather, perhaps, on the discussions in the Academy of which the *Philebus* is an echo; but I can see no reason at all for refusing to admit that Plato himself may have turned these discussions into a dialogue.

The theory also calls for some rather startling inversions of generally received ideas about Plato's dialogues. The *Timaeus* is regarded as a comparatively early work, from which it follows that the *Republic*, in its original form, is earlier still. The *Phaedo* appears as the culmination of Plato's thought. I do not see how this follows even from Döring's presuppositions. He has himself shown us the way to an interpretation of the "other-worldliness" of the *Phaedo* as essentially Orphic and Pythagorean, and he ascribes the so-called "Theory of Ideas" to Eukleides of Megara (vol. i., p. 509). What remains, the doctrine of ἀνταπόδοσις, is palpably Herakleitean. To me this suggests that the *Phaedo* represents a comparatively early stage in Plato's development, before he can properly be said to have had a philosophy of his own at all.

Dr. Döring regards the famous interlude of the *Theaetetus* (172 c.-177 c.) as Plato's renunciation of practical life and the hope of an effective political activity. He then goes on, with great candour, though some inconsistency, to describe the immense widening of Plato's political influence and activity consequent upon his invitation to Syracuse. This is often spoken of as a failure; but that was not the opinion of Archytas and Dion, who were good judges,

and Dr. Doring does not say it. What Plato really renounced was the municipal politics of Athens, which, at the moment, were neither important nor interesting; he never despaired of politics in the wider and truer sense of that word. Dr. Döring, with his usual candour, states the exact truth when he says (vol. i., p. 654) that Plato's last phase is marked by "a striving for harmony with given reality both in the theoretic and the practical field". It is to be regretted that he has not followed this out more in detail.

The only way to form an "objective" idea of what Plato's teaching in the Academy really was is to study its effects on his immediate pupils. In the "theoretic" field we see him directing the researches on which the great edifice of Alexandrian science was built. It was under his guidance that Theaitetos and Menaichmos laid the foundations of higher mathematics, and that Eudoxos and Herakleides sought to understand the planetary motions. At the same time, Speusippos and Aristotle were creating the science of biology. But the influence of the Academy in the practical sphere was greater still. As Eduard Meyer puts it, "Plato was regarded as the highest authority in constitutional questions".[1] He or his pupils were consulted on matters of legislation from Syracuse to Atarneus and Herakleia, from Macedon to Arcadia and Elis. Nor was he discouraged by some temporary rebuffs. "He was unshaken in his convictions and held fast to his faith. Everywhere in the *Laws* we hear distinctly his 'And yet!'"[2] He was, in fact, framing the constitutional and legal groundwork of the Hellenistic world of the next century, and that groundwork remained. The Hellenistic legal system, which we are just beginning to know from the *papyri*, was, to a very large extent, the work of the Academy, and it is the link between Plato's *Laws* and the Roman Law, of which Plato was thus one of the chief authors. Plato had something better to do than to criticise the administration of Athenian local finance under Euboulos, and he did it.

When we come to post-Aristotelian philosophy, we find that Dr. Döring has given an account of its development which is a model in its way, and is certainly clearer than any other known to me. Karneades and Poseidonios stand out as they should, and we are not confused by having to read first the whole history of Stoicism, then that of Epicureanism, and so forth. The reaction of the schools on one another is kept constantly in view, and the whole treatment is most illuminating. It is also refreshing to find the fragments of "Philolaos" in their proper place at the beginning of the section on Neopythagoreanism (vol. ii., pp. 490 *sqq.*). The arrangement of this part of the work deserves all praise, and ought to serve as a model to future writers.

Dr. Döring is not really happy about post-Aristotelian philosophy, which, on his theory, ought to be the fine flower of the whole

[1] *Gesch. des Alterth.*, v., § 988. [2] *Ibid.*, § 1001.

thing. He knows quite well, and often lets us see that he knows, what sad stuff much of it is compared with what came before it. That is another instance of the candour which marks the whole book, and which makes it good reading even for those who cannot accept its main thesis as the author formulates it. On the whole, this is clearly a work which deserves to be better known among us.

JOHN BURNET.

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*Philosophie der Werthe.* HUGO MÜNSTERBERG. Leipzig, Barth, 1908. Pp. viii, 486.

IN Nature as the aggregate of the objects of the natural sciences there are no values, only facts in themselves indifferent. This is more complex than that. Man rules the brutes. Yes. But no notion of higher or better is here implied. That is the fond illusion of the Spencerian naturalism. For values, even the most *de facto* and conditional, we must have recourse to Will.

If we look to individual wills and rest in, say, the subjectivism of the pleasure-pain scale, even with its social projection in the happiness of communities or of humanity, we draw the line between Nature and Will or Spirit at the wrong place, and we reach conditional values only. That would be to oppose the psychical to the physical as our fundamental distinction, and, with the pragmatist, to claim primacy for the will of psychology. As objects matter of psychology will belongs to the field of nature where there is no value. The Will we oppose to Nature is not the will as known to psychology. The sequences in consciousness which psychology deals with are not the living experience—the *Erlebniss* of our willing and acting. The *we* of the one is not the *us* of the other. If there be unconditioned value we must find it in a trans-subjective Will *for* which scientific knowledge exists, as its organon not its norm. This Will obviously can never be comprehended under scientific concepts, such as cause and effect. It is a *Wille zur Welt* above and beyond the determinism of Nature. The self-identity and self-realisation of this Will as free Spirit is the central point of Prof. Münsterberg's mysticism.

If the case for unconditional value and its correlative—this transcendental Will—is made out, the further step is to articulate the different forms in which such absolute value emerges and to sketch the moments of the system of values from *Dasein* up to the *Über-All.*

In the development of his thesis Prof. Münsterberg is often mystical, occasionally, as *e.g.*, in his use of his formula of identity, a little obscure, and sometimes, I venture to think, rather inconsequent. The triads of the table of values (following p. 80) may perhaps be thought artificial. Some of the paradoxes will probably fail to command assent. Yet taken as a whole, the work

possesses something of inspiration, while its detail is of a high degree of suggestiveness.

Will apprehends will directly on Prof. Münsterberg's view, and not by means of the analogy of a like body to the body associated with my will. In the form in which he maintains this doctrine it is hard to see why Wills need bodies, why the world of Nature exists, and why its scientific formulation furthers the work of Will.

Hedonism is refuted by Prof. Münsterberg in the interests of his trans-individual formula. Among other arguments in this connexion comes the familiar one that pleasure is not the object of desire. But in saying that (1) the stimulus is the object of desire, and (2) will is indifferent to the feeling-tone, is not Prof. Münsterberg guilty of the converse abstraction to that which he opposes, and would not at any rate his pragmatist opponents claim a cheap triumph by insisting that what is chosen is neither stimulus nor feeling but the whole situation? In this argument the term 'will' must of course apply no less to the psychological than to the transcendental will, if we are to escape an *ignoratio elenchi*.

In the treatment of the categories of Becoming our writer's insistence upon the principle of identity seems to go beyond the traditional statement that only the permanent changes. Even in the discussion of values of evolution it is a matter of doubt whether Prof. Münsterberg believes in the reality of change. He seems to hold a static doctrine and to claim all the advantages of the dynamic theory at the same time. And the statement (p. 300) that 'in strictness nothing evolves in the world of cause and effect, because nothing can in that world cease to be what it is,' though of course due to the writer's estimate of the scientific point of view, seems to disclose confused notions of the relation of identity to change in any world.

Under the heading of 'Creator' in his treatment of the religious values Prof. Münsterberg takes a line of rather dubious consistency. God is not a cause as the psychophysical mechanism which is a man may be a cause, and his function is that of what others would perhaps call the Law of the Uniformity of Nature. Prof. Münsterberg retains the name Creator, notwithstanding, and frankly admitting that this is no God in the historic sense of the word, he then includes in and with this function those æsthetic and ethical meanings which others have ascribed to the Gods of their devotion. That is, he resorts to something which his pragmatist opponent would have little difficulty in construing as a projection of humanist values. The section, accordingly, is of little value as construction, or I have failed to understand it.

Much more satisfactory in their effect are Prof. Münsterberg's treatment of the relation of the natural sciences to the unique course of events, and the view of history that this necessitates. He raises a highly interesting, if paradoxical, issue. So too the discussion of the place of Psychology among the sciences is of per-

manent value. The estimate of Vitalism is sound. The criticism of *Sollen* as against *Wollen* contains many good things. The section on Economics—that Cinderella, as he says, of the household of the sciences—is instructive, if brief, on the nature of conditional values. And the Æsthetics are adequate. It is scarcely, however, by these things that Prof. Münsterberg's work will stand or fall.

The outstanding issues are rather the attempt to reduce masterful science to the position of a subordinate, and the endeavour to put out of court all relativist conceptions of value.

As to the former, it is along the lines of all will-theories, pragmatism included. Indeed Prof. Münsterberg has stolen the pragmatist's thunder. But while on the pragmatist view, the utility of the science is not obscure, on Prof. Münsterberg's view it is indeed hard to see how a psychophysics, for example, which rests on assumptions not true of, nay, opposite to what is true of, the living experience in which we are free agents, can serve any purpose—other than the establishment of a trans-scientific real through its own manifest ineptitude. Prof. Münsterberg's *Wille zur Welt* develops the sciences from within itself, as auxiliary to what? The answer is not adequately given here.

As to the other point—what Prof. Münsterberg regards as the modern Sophistic with its pleasure-values developed into social values, humanity values, is not all hedonistic, and, where hedonistic, not necessarily affected by Prof. Münsterberg's polemic against Hedonism. Each type of relativist can adduce a rejoinder of his own, and the most daring may adduce the conception, so often formulated against Spencer, of the absolute in the relative.

In fine, Prof. Münsterberg's book, as he himself seems to recognise, is one for the believer. It is really apologetic, though of the type that defends by attacking. Allocutions *ad fideles* however seldom convert the infidel, and it is to be feared that Prof. Münsterberg's post is *in partibus infidelium.*

HERBERT W. BLUNT.

# VII.—NEW BOOKS.

*The Works of Aristotle*, translated into English under the Editorship of J. A. Smith, M.A., and W. D. Ross, M.A. Oxford: Clarendon Press.

Part I.: *The Parva Naturalia*, translated by Prof. J. I. Beare, M.A., and G. R. T. Ross, M.A., D.Phil.

Part II.: *De Lineis Insecabilibus*, translated by H. H. Joachim, M.A.

This considerable undertaking, of the translation of the 'complete' works of Aristotle, has been successfully inaugurated by the publication of a number of the minor treatises. There is no reason to doubt the belief of Dr. Jowett, whose will initiated the project, and of the editors who carry it out, that it will promote the study of Greek thought and literature. As here carried out, at least, the translations are not merely translations but running commentaries. There is, it is true, a certain variation in the method adopted by the various translators. Mr. Joachim, impelled, no doubt, by the state of the text of his treatise, devotes much consideration to the various readings and emendations; it is in fact a pity that he has not provided a text, since he diverges at many points from Apelt, whom he most nearly follows: the other translators more usually take the text for granted. The general editors, again, I notice, make, in the notes near the beginning of Part I., a few suggestions at variance with the interpretation of the translator, but desist from this practice after a little.

As there is no standard method of translating Aristotle, it is not surprising to find that the three translators differ in their methods of rendering the obscurer and more condensed passages intelligible. Mr. Joachim tends to paraphrase rather freely, Mr. Ross to invert order with some frequency, while Prof. Beare adopts a method of expansion and of interpolation in brackets. The last is perhaps most open to criticism. For instance (*De Sensu*, 447 *b* 29, Mr. Beare translates *ἀλλ' ἑτέρως ἑκάτερον τῶν ἐναντίων, ὡς δ' αὕτως ἑαυταῖς τὰ σύστοιχα*, by: "but while both these faculties differ from one another [and each from itself] in their modes of discerning either of their respective contraries, yet in perceiving the coordinates in each province they proceed in manners analogous to each other". This is an instance of interpretative expansion carried to an extreme. The method of interpolated phrases seems similarly to be exaggerated when we find, *e.g.*, the four lines of Greek (448 *b* 26-29) translated by fourteen lines of English, seven of these in all being in square brackets. And this sort of thing recurs rather frequently. To take a smaller example, we have (438 *b* 24) *ὥσθ' ἅπαρχειν ἀναγκαῖον αὐτὴν ὃ δυνάμει πρότερον* translated by: "so that it (the sense) must [at the instant of actualisation] be [actually] that which before [the moment of actualisation] it was potentially". This is to make a translation serve all the purposes of a commentary. However, it is a fault due to care for the last shade of clearness in sense. It is a similar desire that determines some of the peculiarities of his terminology, which yields us on

the one hand good modern equivalents like "inhibition of function" (for *ἀκινησία τις*, 454 *b* 11), and "the residual sensory process" (for *ἡ κίνησις αὐτοῦ*, 450 *b* 27), and on the other hand unnecessary technicalities of doubtful value, like "mnemonic presentation" (450 *b* 26), "kinetic heat" (for *τὸ θερμὸν τὸ κινοῦν*, 443 *b* 15), "is an activity which will not be immanent" (for *οὐχ ὑπάρξει*, 451 *a* 29), "envisages" (*τίθεται*, 450 *a* 6). Nor does the translation of *φαντασία* by "presentation" (449 *b* 30 *et passim*) seem an improvement. Usually, however, the English is above reproach; a comparatively straightforward piece, like the *De Divinatione per Somnum*, goes smoothly enough; and in matters of some real complexity, where Prof. Beare's taste for detail gets its opportunity, we have, in text and notes, some illuminative exposition, as, for instance, in the discussion of the recognition, in Memory, of Time elapsed, or in the distinction of the workings of Custom and Nature (452 *a*). The exposition of the argument of the *De Sensu*, the most important of these treatises, has still greater merits, uniting as it does a keen sense of the Greek with a careful attention to the force of the condensed arguments. Sometimes, it is true, his sense of the argument makes him appear rather too absolute in his decision for a reading he judges consistent with it. Mr. Ross's *πυρρουμένων* (441 *a* 12, for *πυρουμένων*); *ἐνεῖναι* for *εἶναι* (446 *b* 27); and the pretty clear *δι' ἃ πάλαι οὐ* (452 *a* 27, for *διὰ παλαίου*), are readings he might have done better to accept. Prof. Beare's own emendations, as well as Prof. Bywater's, which he sometimes adopts, are too closely bound up with intricate questions of interpretation to receive adequate discussion here.

The share of Mr. Ross in this translation is confined to the two concluding treatises, the *De Longitudine et Brevitate Vitae* and the one mainly on Respiration, but known by a confusing complex of titles. The largely physiological character of these works it partly is which allows of his more straightforward method and the comparative fewness of his notes. There is not perhaps entire harmony between the translators, in such matters, *e.g.*, as the rendering of the difficult *λιπαρόν*; and Mr. Ross dispenses with Prof. Beare's disfiguring brackets, and is briefer; but on the whole the translation forms a sufficient unity, in spite of the rapid transitions of content from acute psychological analysis to antiquated physiology and natural history. I have noted, in Mr. Ross's section, a few instances of a questionable liberty with particles, *e.g.*, with *γὰρ* (474 *a* 11) transformed into "but," and with *διόπερ* (473 *a* 25); while perhaps it is the same fault which keeps obscure the rendering of 477 *a* 15-18. In the same chapter we have the general statement, "It is always in the region proper to the element preponderating in the scheme of their constitution that things exist," where the reference is directly to the classes of winged and terrestrial animals, and can be translated more simply, "And each class has its position in the appropriate region". In 469 *a* 31 there is an unfortunate instance of transposition, *τό τε κατεργαζόμενον τὴν ἐσχάτην τροφὴν καὶ τὸ δεκτικόν* being translated "that which elaborates and that which receives the nutriment in its final form," which seems to support a misunderstanding. *τὸ δεκτικόν*, I think, must be the mouth, and the point is that the heart must lie "between" (and only as a consequence "close to") the mouth and the digestive organs.

Mr. Joachim's task was of a somewhat different character from that of the translators of the *Parva Naturalia*, consisting in the pursuit of a single argument (in effect) round its turnings and through its subdivisions, with a result which is nothing if it is not a consistent whole. With a corrupt text like that of the *De Lineis Insecabilibus*, this means considerable liberty of interpretation and of emendation, and different results in

different hands. Compare, *e.g.*, these dissimilar readings for 968 *b* 26: *ἔτι δ' εἰ ἐν ἐνίαις σύμμετροι γραμμαῖς εἰσι γραμμαί* (Apelt); *ἔτι δ' εἰ ἐν τῷ συνθέτῳ [ἄτομοί εἰσι] γραμμαί* (Mr. Joachim). In this case, and in several others, Mr. Joachim has the advantage, in that his only change is the filling up of an acknowledged lacuna; and in general, though he uses Apelt's work largely and adds to it, his additions are restrained. In the result, these pains give us a lucid and, especially, a clearly divided sequence for the argument. The two passages which he gives up 969 *b* 16-26, where he merely paraphrases to give the general sense, and 972 *a* 1-3, where he merely prints the corrupt Greek without attempting to translate) are of no general importance.

In 970 *a* 26-33, Mr. Joachim's explanation of the bearings of *διαίρεσις εἰς ἄνισα* is probably adequate, but does not really require the rather drastic dropping of eight words in line 31; on either his own or Hayduck's emendation they are merely slightly otiose. Part of the note to 970 *b* 30-971 *a* 3 is rather startling. The argument is that every plane, *however small*, is divisible, and Mr. Joachim remarks that the upholders of indivisible lines might "have insisted that a plane figure though divisible might yet have as *one* of its containing sides an 'indivisible line'". The reading (971 *a* 29) *εἰ γάρ τι ἐστὶν ἢ θάτερον μὴ ἐστιν*, "for if either of them is anything in any respect in which the other is not," seems rather a makeshift, though perhaps it is no worse than Apelt's. At 971 *b* 24, probably the sense obtainable from the manuscript reading is sufficient, "a line cannot be formed by conjunction"; for from this there still is a step to be taken to the next clause—"hence neither will a line consist of points". At 971 *b* 31 the emended reading *ἦ* (for *ἢ*) *εἶναι γραμμὴν συνεχῆ*, "in so far as the line must be continuous," seems, as the awkward English indicates, inferior to the simple insertion of *μὴ* before *συνεχῆ*, and the sense is almost the same; a chapter later, however, a repetition of the same emendation (*ἦ* for *ἢ* 972 *a* 29) is quite happy, and in keeping with the close compressed style of this part. In the last section there is possible a variation of interpretation. Aristotle is criticising the definition of the point as "the smallest constituent of a line," and Mr. Joachim assumes (in his notes only), that the other constituents are infinitesimal ("indivisible") lines. But, not to speak of the fact that points are *alternatives* to indivisible lines, the sense is satisfied if ordinary, finite, divisible, lines are meant. And what is intended by the denial that points are "smaller" than "lines" is simply that they are not comparable. As Aristotle says here, "the line is not bigger than the point, for neither is the plane bigger than the line".

There is an index to Part I. which seems trustworthy and reasonably full.

JOHN HANDYSIDE.

*Essays on Evolution*, 1889-1907. By EDWARD BAGNALL POULTON, D.Sc., F.R.S., etc., Hope Professor of Zoology in the University of Oxford. Oxford: Clarendon Press, 1908. 8vo. Pp. xlviii, 479.

The author is a protagonist in the war over the fundamental doctrines of organic evolution, a war that, more than the outside world is well aware, rages continually and knows neither truce nor lasting peace. The matters in dispute are of high importance, but in the present state of the combat the spectator would be well advised to avoid taking a side; he has enough to do meanwhile to determine what are the points at issue, and how many sides there be to the quarrel.

The present volume contains articles on such subjects as the Age of the Earth, the Definition of a Species, the Inheritance of Acquired

Characters, and other papers, more lengthy and elaborate, on the phenomena described as Mimicry and Mimetic Resemblance. The views enunciated are those of a strict disciple of Darwin and of Wallace, views based in the outset on the undisputed facts of individual variation, inheritance of inherent differences, and the excess of birth rate over means of subsistence, which last implies a struggle for existence. Natural Selection, based upon these three factors, gives according to the strict Darwinian school an adequate explanation not only of the evolution of species, but above all of the adaptation of all living things to their environment, and so of such minor but very curious phenomena as mimicry, protective coloration and the like.

The Darwinian is essentially a teleologist, just as were the old-time naturalist-theologians; and the quest of a "final cause" is notoriously difficult. In the phenomenon known as "Mimicry" some butterfly (or other animal) is found to depart more or less from the normal pattern of its kindred and to resemble in a striking but superficial way some other butterfly appertaining to another family: the "reason why" or final cause of this phenomenon requires to be ascertained. According to hypothesis the mimicked butterfly is essentially nasty while that which mimics it is nice, from the point of view of insect-feeding birds or reptiles; and accordingly it is of advantage for the latter species to grow to resemble the former, and its chance of survival or "fitness to survive" increases as it does so. This, we understand, is the *final* and Natural Selection the *efficient* cause. One of the commonest and best-known cases of mimicry (among many hundreds) is presented by two widespread butterflies that we shall call, for short, Chrysippus and Misippus, the latter being that which "mimics" the other. In the original statement of the theory, by Bates, it was held to be the rule that the distasteful insect was vastly commoner than the other, so that the birds were well trained as to the nastiness of the type, and the comparatively few mimics, however palatable, got off scot-free. But in this particular case, the mimic, instead of being "a hard-pressed form which managed to survive by its deceptive likeness to some well-known, specially protected, conspicuous, abundant model," is itself "an extraordinarily dominant species and may often be met with more abundantly than its model". Moreover, it is now discovered, or surmised, that both of these butterflies are *equally nasty*; and the theory has accordingly to be modified to one of "Reciprocal advantage," in other words it has to be supposed that each insect now benefits in the struggle for existence by the distaste engendered in the common enemy by the nastiness of the other. This variant of the phenomenon is known as Müllerian mimicry, or synaposematic coloration. The matter is further complicated by the fact that the mimic lives in many places where the mimicked insect does not coexist. We are informed that "it *has now succeeded in establishing itself* and lives without its model in several places in the New World—Florida, certain West Indian islands, Demerara, Brazil. This remarkable extension of range is mainly due to its wonderful power of flight, but also to the possession of qualities the very reverse of those commonly supposed to be characteristic of a Batesian mimic." Yet another difficulty which presently confronts the teleologist is that it is only the female Misippus which mimics the pattern of the other; the explanation given is that the swifter flying males are less open to pursuit or persecution, and stand less in need of special devices for their protection. But "the non-mimetic male of Misippus is itself beautifully mimicked on both upper and under sides by two Nymphaline butterflies in Western China," and this is the more perplexing because, while Misippus is widespread throughout the tropics all round the world, it "becomes much

rarer in Northern India, and has never been known in Western China where its mimics are found". In short, it is said to be mimicked where, and only where, it does not exist. Prof. Poulton is not discouraged, but is "driven to suggest two alternative hypotheses: (1) The model, with its immense powers of flight, has visited Western China sufficiently often and for long enough periods to render the mimetic resemblance advantageous. (2) A more probable hypothesis is afforded by the lines of migratory birds, applying in the temperate zone where they nest the experience learned in the tropics." We have not chosen this particular case as an especially difficult one; on the contrary, Prof. Poulton has chosen it himself as one of the best known and most instructive cases of mimicry—as a stock example and central pillar of the theory. He tells us that it "serves as an illustration of the changes in interpretation wrought by the accumulation of new observations. But the outcome of such modifications—and they are taking place everywhere in the field of natural history—is that Natural Selection rests on an ever broadening foundation." We should be much inclined to substitute *ever-shifting* for *ever-broadening*. But the method of deduction commonly employed may be illustrated by a much simpler case, for which the Hope Professor is solely responsible. He tells us (p. xliv.): "A few days ago I was passing some cases of Oriental butterflies and moths which had been exposed to light for a long period of years. I noticed that the pigments of the moths had as a whole faded far more than those of the butterflies. It at once occurred to me that stable pigments are far more necessary for the butterfly exposed to the light of a tropical sun than for the moth, flying in the evening or at night. Hence a much higher level of stability would be selected in the pigments of butterflies than in those of moths. . . . It explains the reason why pigments with particular qualities were selected, and have now come to be characters of certain species." Truly these teleologists carry their ideas of purpose and adaptation very far, and the burden laid upon Natural Selection is heavy indeed.

There seems to run through the above arguments a plentiful lack of quantification of the predicate, and it would not be very easy to state them in logical form. They would be found, we think, to form a long sorites, each premiss containing the qualifying expression "probably" or "apparently" or, to be candid, "perhaps"; and "perhaps" would have to be writ so large in the conclusion that it would be found scarcely worth the drawing.

As the argument is not easy to state, so it is difficult to controvert; and the unbeliever is tempted simply to stand aside and say that it carries no conviction to his mind. And here, lest we be greatly misunderstood, it is necessary to point out that the controversy is not whether Natural Selection be an active factor in evolution or not, but solely as to the scope of teleological explanation, as to the meaning and limitations of "adaptation" or "fitness". Is the sparrow really the better and the fitter, in an essential and indispensable way, for his brownness, or the oak-tree for the jagged outline of its leaf? Or are not all such myriad differences simply the expression of the infinite possibilities of growth, the infinite permutations and combinations of ways of growth and being, that, unless or until they happen to be actually harmful or unfit, increase and multiply, and of which it "takes all sorts to make a world"? It is the old crux of the Philosopher, as to what things are ἐξ ἀνάγκης, and what ἕνεκά τινος.

While we are impressed by the complexity and by the insecurity of Prof. Poulton's arguments, we are not less struck by the vehemence with which he supports them and the extraordinary force of language in which he deals with divergent opinions. The footnotes of the old classi-

cal commentators, "*pessime* A., *ineptissime* B.," are matched in good plain English of our own time by this strenuous champion of an evolutionary school. The Professor of Biology in the University of Cambridge is a disciple of Mendel, and there is war between the tribe of the Mendelians and the tribe of the Darwinians. The Hope Professor in the University of Oxford is "almost startled at the narrowness and prejudice which are continually apparent" in the writings of his adversaries; their writings are "injurious to Biological science," by reason of "the amount of dogmatism concerning work with which the writer is evidently imperfectly acquainted," by "assumptions made on the slenderest evidence," by their "exaggerated estimate of the importance" of their own and their "contemptuous depreciation of other lines of investigation". He tells us that "Bateson pours his scorn on a far greater and much older man than himself; . . . but however necessary it may be for him to borrow the information, he can always supply the scorn": "'Codlin's the friend, not Short,' was the dogma rather than the advice which he [Bateson] issued to the world". A generation ago Lord Westbury, in the Yelverton case, did better than all this when he spoke of Lord Ardmillan, an esteemed brother of the Scottish bench, as "This wooden-headed judge!"

Is there only mud in Isis, and never a small smooth stone in the brook!

D. W. T.

*Christian Theology and Social Progress:* the Bampton Lectures for 1905. By F. W. Bussell, Brasenose College, Oxford, Rector of Sisland, Norfolk. London: Methuen & Co., 1907. Pp. xl, 343.

This close-packed volume is a generously conceived edition of Mr. Bussell's Bampton Lecture, to which he has added eight supplementary chapters. Hence nothing is left unsaid which may help us to grasp and estimate the point of view of a writer who commands an exceptionally wide field of historical and philosophic culture. He states the aim of his work as follows: "To show how general welfare is bound up with the faiths and hopes of Christian belief; and again, how the general welfare can only rightly be secured by justice to the particular, by respecting the units which make up the whole; a heap composed of valueless atoms is itself without value". What will chiefly be of interest to the readers of this journal is Mr. Bussell's standpoint, which may be described roughly, but not unfairly, as that of the school known as Personal Idealists. He is the convinced foe of intellectualism; "one thing is absolutely certain, that the Gospel puts no undue premium on intelligence," and "an intellectual or dogmatic exposition of Christian teaching is and must remain entirely subordinate to its moral preaching, to its spiritual usefulness tested in experience". It is a fatal mistake, therefore, to narrow Apologetic by the effort to satisfy the speculative reason, to the neglect of the "affective" and sub-conscious forces that in religion actually impel man and men. "Christianity was from the first *universal* and *democratic*, in the only true sense of adaptation to the *common* needs of average mankind." Akin to this is the sharp distinction insisted on between religion and theology. "Religion, the untutored and spontaneous language of the human heart, seeking a meaning in life and a permanent value for the soul, stands contrasted with theology, which is its grammar, systematic, orderly and reflective; stands contrasted, too, with ethical system or with philosophy. . . . In an age like the present, it is no time for Philosophy or Theology to claim to stand apart from, or above, the impulses and aims of average men. . . . Experience is in the last

resort the sole test for the individual, though logical consistency must preside at the formation of a Creed." In this sense the Religion of history, of human development, is put in diametrical contrast to the religion of nature or of absolute thought; and it is held that all systems belonging to the latter class fail through their denial of worth or meaning to conscious life, and by demanding a surrender to the unknown. After the false individualism of the eighteenth century, Kant led the way back to a true conception of the individual's relation to the State by declaring afresh "that the differentia of man is not *intelligence* but *morality*, and that the true Christian and democratic spirit will appeal not to the exceptional faculty of reason and enlightenment, but to the universal sense of duty and willing service in the cause of the Right". But thought has not remained at the plane to which he lifted it. During the past century great systems have been set forth which divest Nature, the State, and God, of all moral content or implication. Hegel has encouraged a tendency (which needed no encouragement) to make ethics a reflective acquiescence in the general moral ideas of society. If ethical notions which go beyond this are felt to be unstable, and if speculation is obviously played out, all the more needful is it to furnish men with incentives to the higher sort of action and attitude, to quicken the still surviving sense of personal value, agency and worth. We must listen to "the protest of individual human nature against its absorption in a mysterious universal; in it is a demand not so much for happiness as for leave to work". From another point of view this means that Nature is to be explained by man, not man by Nature. But the "man" in question is not a Robinson Crusoe, cut off from the giving and receiving of social life. Rather "to preserve self is not (as thought Spinoza) a retreat to the calm of contemplation, to cease to be 'a part of nature' tossed by passion, but to take a share in the work of the world, and while respecting other's rights to hold one's own". The denial of humanistic standards must be counteracted, but that can be done effectively by those alone who perceive that no man lives to himself. In the concluding lecture it is argued that in the great idealistic systems of the recent past we have what is at bottom a reasoned argument for transferring "virtues and emotions natural to a world of moral purpose and individual meaning, to a secular process, where to 'follow Nature,' the only known law, is to struggle at all cost after survival". But the ideals of a true democracy are not to be realised along lines which seem to imperil the very existence of ideals as such. The whole discussion ends on a note of mingled warning and religious hope. "It is far from our purpose to deride the unconscious piety of the apostles of Enlightenment or disparage the well-meant efforts of the leaders of Reform; but it is time that attention was directed to the forces, intellectual and social, which are slowly but surely dissolving our Western civilisation. The Gospel, in its simple appeal to the individual consciousness, in its certain and confident answer to the problems of life, demands no greater venture of faith than we see underlying the speculations of honest doubt."

A sketch of this sort does less than justice to Mr. Bussell's crowded book. If it has a fault, indeed, it is that he has put too much into each paragraph, and the very hackneyed complaint is forced to the reviewer's lips that he cannot see the wood for the trees. If Mr. Bussell had given us less we should perhaps have owed him more. *Non multa, sed multum* might have been a better plan. No one will feel this more keenly than the reader who shares Mr. Bussell's point of view, and wants a guiding thread by which to make his way through the interesting particulars of argument to the universal principle or principles of the conclusion.

H. R. Mackintosh.

*Faith in Man. The Religion of the Twentieth Century.* By GUSTAV SPILLER. London: Swan Sonnenschein & Co., pp. vi, 190. 1s. 6d. net.

The Religion of the twentieth century, the religion of Democracy, will, in Mr. Spiller's conviction, be essentially ethical in character. It will be the religion of an ethical movement which shall regard the ethical test as supreme over all other tests and apply it in every relation of life (p. 187). In its briefest form this test may be condensed into the motto, "Deed, not Creed," and to this extent the new Ethics is activistic or pragmatistic in spirit. But in so far as stress is laid on solidarity rather than on personal initiative, and Man, the Man of democracy, raised to the supreme place in human regard, the tendency of the New Ethics, as conceived by Mr. Spiller, is still more distinctively positivistic (p. 98). And yet it shares none of the hedonistic convictions of English Utilitarianism, nor does it accept the doctrine of Utility except in so far as utility is "reinterpreted to mean that which leads towards complete human solidarity, that which is useful for such an ideal purpose". The keynotes of the New Ethics are fraternity and simplicity. The modern caste-system must vanish and co-operation take the place of competition. Men must turn from the vanities of pleasure-seeking and the follies of luxury to the great inspirations of social and civic reform. And the sanctions for the indefinite progress here implied lie in human nature itself and must be made effective through education. The need of sympathy and of social order is indigenous to human nature, and morality is but the developed expression of these primæval needs. But this development must be guided by education. "The new Ethics has no more faith in economic panaceas than in religious ones. Through education alone lies the direct route to social and moral redemption. . . ." "Faith in science, independence of thought and action, ripeness of judgment, simplicity, purity, sobriety, sympathy, devotion to a social ideal, will be attributes of the average man only when that average man has been properly educated" (p. 178).

Religion is defined by Mr. Spiller as "a helpful philosophy of life" (pp. 131, 35), but in this definition the implications of the term "helpful" are held to be far more important than those of the term "philosophy". Naturalism, Science, humanitarianism and democracy are the things that help. Hence a plea is made on behalf of "a religion, or system of life, whose foundation shall be human solidarity, and whose pillars, in accordance with modern thought, shall be naturalism, science, humanitarianism and democracy" (p. 43). Strictly philosophical considerations, on the other hand, are inevitably discounted in the eyes of a movement whose general aim is "to assert the supreme importance of the ethical factor in all the relations of life, personal, social, national and international, apart from all theological and metaphysical considerations" (p. 187). Thus we are told that the moral interest in the question of free-will "has almost faded" (p. 126), that "general philosophical problems have little interest for the new ethics" (p. 132), and finally that "ethics is infinitely less dependent on philosophy to-day than it used to be," whilst "philosophy promises to be almost altogether dependent on ethics" (p. 136).

In Mr. Spiller's book we find presented a Weltanschauung which inculcates "love, solidarity, identification with our fellows" (p. 120), emphasises the importance of personal endeavour, sets its face against every form of impurity and greed, and urges sincerity and simplicity as keynotes of social reform. Such a scheme of life must needs win wide sympathy and approval even from the reluctant philosopher whose

susceptibilities the author has so little considered, yes, and even from the theologian who has been made to understand that "the Church Ethics must go willy-nilly" (p. 42). Still the author's disparagement of philosophy is peculiarly regrettable at a time when the deepest interests of life are tending more and more to instil their own vital significance into all the fundamental philosophical problems. And it is moreover inconsistent with the author's own views as to the use of the intellect which, as he puts it, "cannot be too highly recommended in matters moral" (p. 122). We would seem authorised to point out that the substitution of the service of man for the worship of God still leaves our human nature a problem, and calls for a critique of the idea of personality. Similarly, the abandonment of external authority for the authority of human nature and experience suggests at once the questions: "What is the nature of the new authority? How does it differ from the old? How is it related to the idea of freedom?" But with the raising of these issues the problem of Freedom reassumes its full moral significance, and with it come trooping back, irresistibly insistent, all the perennial problems of our human life and destiny. And who can assert, apart from philosophical discussion, that these problems of the spiritual life have a merely episodic value, and can concern only our over-beliefs? Can we live in the same way for time as we would for eternity? And even if we esteem ourselves immortal, must it not still be a matter of the first concern for our conduct whether we hold the eternal to be the mere prolongation of the temporal or its present transfiguration in a sense which gives to life itself a new inwardness and depth? In any case, a faith in man which would forecast the religion of a century cannot remain indifferent to these fundamental questions, and the new Ethics, if it is to meet and satisfy the reflective interest of its friends, must look to the soundness of its philosophical basis.

W. R. Boyce Gibson.

*The Will to Doubt. An Essay in Philosophy for the General Thinker.* By Alfred H. Lloyd. London: Swan Sonnenschein & Co., 1907. Pp. x, 285.

The daring level on which the writer's thought proceeds will be sufficiently indicated by the fact that in his hands doubt expands into a universal principle unfolding from its transparent implications the nature of the absolute, of the one and the many, and of society, including a critique of knowledge ordinary and scientific, cutting the Gordian knot of the psycho-physical problem and culminating in a proof of immortality. It is difficult to estimate the value of the leading arguments (stated as they are with great ability); since these are relative to an unacknowledged assumption which Prof. Lloyd carries with him in his approach to the subject.

"Scepticism is a world-wide, life-wide fact; even like heat or electricity, it is a natural force or agent—unless forsooth one must exclude all the attitudes of mind from what in the fullest and deepest sense is natural; scepticism, in short, is a real phase of whatever is real" (p. viii.). To the statement that doubt is a fact in nature just like any other fact no objection can be taken; and the analogy with natural phenomena is quite appropriate. The difficulty is that Prof. Lloyd does not keep within the bounds of the analogy. Had he done so he would have treated scepticism as a psychological phenomenon appearing under certain more or less clearly ascertainable conditions, and universal in the sense that it appears *uniformly* under these conditions as its laws. But he inter-

prets this "world-wide, life-wide fact" as "a real phase of whatever is real," and so transfers its subjective reality as a law-conditioned psychical phenomenon into an objective principle. Doubt is treated as a character in all consciousness, and by way of proof the writer adduces at length the contradictions which underlie all thinking—which, *e.g.*, in ordinary life, divide the religious and the secular consciousness, and distribute the scientific view of things among a number of alien abstractions. Prof. Lloyd tacitly transforms the sceptic's *de jure* argument against the certainty of knowledge into the *de facto* contention that scepticism enters into all consciousness. "Doubt" and "doubtful" are made to play a single *rôle*.

This identification at once lifts the problem from the psychological to the metaphysical level, and at the same time determines the peculiar features of the author's standpoint. The knowledge into which doubt must enter is clearly not a knowledge which can rest in any content, and the reality to which such a knowledge corresponds transcends definition. The significance of consciousness and the reality of things are relative not to any form or content which they may assume, but to their dynamic character as capable of assuming any form at all. The pursuit of science, involving the separation of "professional" and "practical" classes, results in a "disrupted society" and a "disrupted life" (p. 62); and the attempt to make science equal to the whole of reality gives rise to duplicity within the scientific view itself. This expresses itself as dualism, objectivism and agnosticism. Fortunately the disintegrating tendencies contain within themselves their own correctives. Theoretically the various abstractions cancel each other by calling in "working hypotheses," which are "doors in the panelling by which the other sciences are quietly admitted to a room seemingly tightly closed to all comers" (p. 89); and socially doubt, acting through the sense of dependence and the greater freedom it gives for enlarged associations, becomes a bond of union. Contradiction becomes a fundamental principle in dynamic reality, and truth is continually presented from the standpoint of its negative. "The contradictions by which the compensation [for the various abstractions of science] has been effected are, then, interpretable not more as causes of doubting science than as reasons for confidence in it" (p. 105). . . . "The truth of science would seem to lie in the ratio, the working together, of the errors of science" (p. 106). Truth is not "a specific consciousness," "a creed," but a "spirit" (p. 152). "Reality, or truth" is a "principle," not a "programme" (p. 200). The world of the doubter is "untethered" and "infinite"; but it is "without form or residence". In such a universe there is certainly need to emphasise their contradictions if the definite forms of finite things are to have any lodgment whatever within its reality. But "the very conflict of the relative *ipso facto* puts it in perfect unity with the absolute" (p. 201).

If a conjecture may be ventured, underlying Prof. Lloyd's argument is the genuine paradox that doubt implies an ulterior belief or faith, and that the fuller reality is, the richer is it in contradiction. Thus in a sense it is true that "we believe in the very things we doubt" (p. 252). Surely the treatment such contradictions call for is that of critical analysis. But to sink belief and doubt abruptly in a single process vaguely denominated "spirit" or "life," and to declare the latter devoid of all definite form or finality (which, of course, this procedure demands), is to hypostatise, not to solve the paradox.

A. A. B.

*The Logic of Will: A Study in Analogy.* By HELEN WODEHOUSE, D.Phil. (Birm.). London: Macmillan, 1908. Pp. xix, 157.

The title of Miss Wodehouse's book raises expectations which its contents do not altogether fulfil. She describes it in an introductory chapter as an essay whose unity "comes only from the fact that the guiding interests have been primarily ethical, so that most of the investigations come to be grouped round certain ethical problems" (p. 2). She goes on to explain the "context" of these problems in a passage which can be meant only to appeal to students of philosophy. She alludes to 'idealist and intuitionist ethics' and proceeds to suggest that "the next step required in ethics" is "to clear up the problems that lie between the idealist and the intuitionist grounds" (p. 4), so that the reader is encouraged to hope for some new light on philosophical doctrine, or at least that the writer is about to "formulate the type" of some "highly denominational creed" (*cf.* p. 5). In fact she herself suggests that the discussions which follow may help towards such an object. Yet in her later chapters (*cf.* chaps. iv., v. and following) she disappoints us by treating the subject in a way which must appeal only—and seems meant only to appeal—to readers who are *not* experts in philosophy. So for instance, on p. 82, after a paragraph on truth as harmony, she adds: "An experience, then, is true, when it is *such as* to be harmonious and to stay harmonious. That is the practical result of this mysterious-sounding paragraph. If personifications do not help the reader he may drop them." To the student of philosophy the notion of truth as harmony can be no new thing since the days of Plato, and this kind of explanation seems fitted rather for beginners than for advanced students. In fact on p. 148 the author states this frankly. "I am simply trying to express something in a way that I think a beginner might understand." But such an aim seems far from that indicated in the opening chapters.

This fundamental inconsistency makes it very difficult to judge the author's powers as an exponent of philosophy. On the one hand her words seem often to lack clearness. There is a certain ambiguity for instance in such phrases as the following: "We think of the things we care about, and work at them till they look better" (p. 38). "Sometimes we get rid of undesirable impulses and incongruous ideas . . . by following them out and finding the *impossible incongruity* of these with the rest of the world to which we hold"; or again on p. 77—of the ideal experience—"it will be an attribute of it at any rate that it conforms to any element in it that we like to pick out"; and p. 79: "When we seek for a bit of experience that is sure to be right we are driven beyond experience and to something which shows itself only in the experience as a whole". These are expressions of which I confess I find it very difficult to make sense. On the other hand here and there one is met by statements that seem annoyingly obvious: "*Mechanical metaphors*[1] though indispensable must always be hopelessly insufficient" (p. 43). See also the discussion on p. 94, paragraph 3, and again on p. 88, paragraph 3, where this statement occurs (in regard to Achilles' want of morals in respect of his captives): "It is true that the respect (for his women captives) would not have been outside the power of Achilles' will if he had chosen". This seems something very like tautology!

It is curious that, though Miss Wodehouse is apparently setting out to give a philosophical and psychological interpretation of Will, she seems afraid to do more than suggest as a possible article of faith what modern psychology finds no difficulty in regarding as fact. She persists in speak-

[1] The italics here are the author's.

ing of Will and Thought as separate spheres, subject indeed to "certain sideways conditionings by each other" (p. 56), and though at one moment she gets almost to the point of identifying them (*cf.* p. 74, note 2), yet she insists that they must be regarded as separate "for fear of confusion" (p. 74). It is rather this very separation which seems to be the cause of confusion and to make the essay in fact consist largely in mere fighting with shadows—the ghosts of an old-fashioned psychology.

And in fact the arguments brought forward by the writer are sometimes no better than these same ghosts (as for instance the suggestion on p. 45, that the developing consciousness is governed by the '*idea* of consistency'), and so the whole discussion lacks substance and becomes unreal.

The author seems to ignore the standpoint of genetic psychology in favour of that of mere explanation or description, and this leads to some curious conclusions, as for instance on p. 63 where the 'conative self' is found to correspond with the 'cognitive not-self'!

The book, as a whole, seems to be a courageous but premature attempt to throw into shape certain conclusions of the writer which have been formed with too little regard to those of more recent psychological investigation.

M. H. Wood.

*Éthique : Traité de Philosophie Morale.* Par L. Du Roussaux, Professeur à la Faculté de Philosophie et Lettres de l'Institut St. Louis, à Bruxelles. Bruxelles : Albert Dewit, 1907. Pp. xii, 309.

The author tells us, in the Preface, that "nothing will be found in this work which is not known and professed by the Scholastics" : its novelty lies only in its form, in the method adopted and in the redivision of the materials. Its method is the analytic or inductive, not the synthetic or deductive. M. Du Roussaux distinguishes carefully, however, between induction in the metaphysical sense and the induction of the physical sciences. "Il s'agit, bien entendu, de l'induction dite métaphysique ou d'attribution, qui de la nature du dérivé conclut à la nature de ses principes réels. Ce procédé n'a rien de commun avec l'induction physique, qui du phénomène dégage la loi. Prétendre appliquer l'induction physique aux choses de la morale, ainsi que le positivisme naturaliste est en train de l'essayer, c'est comme vouloir étudier la lumière avec l'ouïe, c'est un pur non-sens." "L'induction métaphysique suppose toujours pour point de départ une réalité constatée, et pour principe logique l'axiome de raison suffisante. En ce qui concerne l'Éthique, le fait d'observation d'où l'on part, c'est la présence en nous de la vie morale : l'activité personnelle vinculée par l'impératif de la raison, voilà une situation de fait, un état de choses incontestable et incontesté, encore que les interprétations qu'on en donne ne soient pas concordantes." The inductive method, in this sense, is recognised by all Scholastic writers, but is not kept clear of deductive arguments. The innovation of the present treatise is simply that it keeps steadily to the inductive method, "commençant par l'analyse du fait moral en lui-même pour ensuite remonter de proches en proches jusqu'aux sources tant subjectives qu'objectives de ce fait".

The acceptance of the inductive method leads to a redistribution of the contents of the science of ethics. "Le partage de l'Éthique en deux livres correspond à une dualité d'aspect dans la chose étudiée, ainsi qu'à une dualité d'attitude dans l'esprit qui l'étudie. En effet, la vie morale, comme toute chose, du reste, peut être considérée *formaliter*,

c'est à dire en elle-même, dans son entité propre, dans ses éléments constitutifs, telle qu'elle s'actualise dans la conscience personnelle : à ce point de vue, elle est l'objet de simple introspection. La vie morale peut être considérée *fundamentaliter*, dans ses principes ontologiques, dans ses conditions de possibilité, dans les réalités foncières qu'elle présuppose pour être ce qu'elle est : sous ce rapport, elle est un fait à interpréter par ses causes, elle donne matière à induction." "N'est-elle pas une traduction convenable des termes correlatifs 'formaliter' et 'fundamentaliter,' par lesquels sont désignés chez tous les auteurs le plan et l'arrière-plan de la réalité?" The author prefers to call the second part "real," in contrast to "formal" Ethics. This second part of "General Ethics" is not, however, to be confused with "la Morale Spéciale, qui est la science des droits (Droit naturel) et des devoirs (Déontologie)". "L'Éthique réelle étudie la moralité objective non par les détails, comme ferait la Déontologie, mais par le fondamental."

It is unnecessary to follow the author into details. The first book reads like a work of the Intuitional school : no attempt is made to reach a unifying principle of moral judgment. At the same time there is much that is accurate and fine in the statement of the "facts" of the moral consciousness. In the second book the question of the moral criterion is taken up, but the discussion is lacking in thoroughness, and the return is always made to a dogmatic or intuitional point of view. The examination of opposing views is far from convincing. The same must be said of the account given, alike on its controversial and constructive sides, of the moral motive, of moral obligation, of the moral law, and of "the moral *dénouement*"

JAMES SETH.

*Pascal's Ethik: eine Historische Studie.* Von ADOLPH KÖSTER. Tubingen : J. C. B. Mohr, 1907. Pp. xiii, 172.

With a little more courage, Pastor Köster would have written an excellent book. He has a thorough first-hand knowledge of Pascal ; he has the modern literature of his subject at his fingers' ends, and his occasional observations show that he has entered deeply into Pascal's spirit. But his modesty has kept these within the narrow limits of a parenthesis or a foot-note. The bulk of his slim volume is taken up with long quotations from the *Provincial Letters* or the *Pensées*, so numerous as to bring the reader into serious danger of forgetting the wood for the trees. Nor does he make any attempt to treat the historical side of the question. Not a word is said of Pascal's scientific youth ; although it is certainly worth mentioning that his attack on the *a priori* ethics of the casuists was preceded by an equally vitriolic attack on the *a priori* physics of Descartes. It is true that a short chapter is devoted to his "æsthetic phase"—to the period when he was haunting the *salons* of the *précieuses*, and writing his *Discours sur les Passions de l'Amour*. Yet it was certainly while he was studying the psychology of human love that he became converted to his characteristic belief in the primacy of the will.

Köster is more successful in his treatment of the Jansenists. They were at once a product of, and a protest against, the spirit of the Counter-Reformation. True to their Catholic traditions, they insisted that the first essential of religion was communion with the Church of Rome ; they also thought that the surest way of stemming the tide of Protestant revolt was to revive the ascetic severity of the mediæval saints. On the other hand, they could not away with the new-fangled Catholicism

championed by the Jesuits. This famous Order had been founded by a Spanish soldier to bring back a rebellious world under the Roman yoke; and naturally it set about its duties in a spirit of military discipline and precision. "The whole trend of Jesuit ethics," says Köster, "is to banish from the moral sphere all that is difficult, paradoxical, hard of explanation, all that brings doubts and struggles in its train. Their one object is to make everything as comfortable and safe as possible. It seems to them a dreadful thing to see a weak man face to face with perplexities of conscience. They rush at once to his assistance, and relieve him of his load; nor does it ever occur to them that they are thereby stripping him of his divinity, and reducing him to a machine. For it is just in that life-and-death struggle, in that parlous *Muth zur Freiheit*, that true morality appears." In other words, the Jesuits did all they could to discourage men from thinking for themselves on matters of religion and morality. Their one duty was to make an act of blind surrender—to "believe all the Church believes, because the Church believes it". And, in return for this submissiveness, the Church undertook to relieve them of all their difficulties and doubts.

The Jansenists represented the other side of the picture. They brought into especial prominence what Bossuet called *la face hideuse de l'Évangile*—the obscure, incalculable element in religion, its "thunderclaps and visible upsets of Grace". The great abbess, Agnes Arnauld, was always bidding her nuns observe how unreasonable God's Reason was; and Saint Cyran, the real father of Jansenism, poured unending scorn on Jesuit attempts to pack the truths of faith up into neat formulæ. Their *ludi-magistri*, he said, spent their best years teaching elementary logic to little boys; late in life they took to theology, and proceeded to expound the inmost secrets of the Universe in the light of *barbara* and *baralipton*. Still more contemptuous was he over their endeavours to bring a cheap and easy certitude within the reach of every one. "Men naturally love certainty, and like to see their path marked out before them beyond all possibility of mistake," wrote his disciple, Pierre Nicole. "But the light of faith teaches that God pays no regard to this human inclination. He thinks it better for us to work out our salvation along a precisely opposite path—a path of darkness, doubt and fear—whereby we are kept ever trembling and humiliated in His presence, and dependent on His light and help." In other words, there was no taking over religious truths at second hand; if a man wished to be religious, he must set his mind to work. Nor could he escape by pleading that he was ignorant and a layman. "They do great honour to Nature," says Pascal, "who teach her to have an opinion on everything, even about theology." But how ensure that Nature would think both independently and rightly? Jansenism answered with its doctrine of Irresistible Grace. This maintained that the whole mental and moral guidance of the Christian was directly guided from On High; when he seemed to be thinking for himself, he was really obeying the inward promptings of the Spirit. Thus all excuse for relying on others was taken away. "It is the consent of yourself to yourself that ought to make you believe," says Pascal, "not the voices of other men." This, as Köster rightly maintains, is the real burden of the *Provincial Letters*. They do not attack the Jesuits for being lax, so much as for trying to make the decisions of experts do the work of the individual conscience.

And God has so laid out the Christian life as to keep Conscience ever on the stretch. As Köster says, He is not so much a loving Father as an ethical goad and spur. In Pascal's favourite phrase He is a hidden God, whose will is very imperfectly revealed. Hard as it is to do one's duty, it is often harder to know what one's duty is. Hence came Jansenist

rigorism. Men clung to what they knew to be certain, and refused to take a single step forwards without positive warrant from Above. As Pascal said, the only difference between a pleasure and a sin was that God certainly misliked the second, and only probably misliked the first. But Pascal's life was lived under a double terror; to the Puritan's fear of sin was added the mediæval ascetic's horror of the "world". Jansenists were in a special degree disciples of Augustine; and he had done more than any man to materialise the contrast between the Mystical Kingdom of God and the kingdom of this world. Under his hands the *Civitas Dei* took visible shape in the organisation of the Catholic Church. Within the Church alone could righteousness be found; the world was its devilish counterpart, given over to all uncleanness, a habitation of bats and owls. Hence the first object of the Jansenist preacher was "happily to depeople earth, and give new citizens to Heaven" by driving his hearers into a convent, and thus cutting them off from all possible risk of secular infection. For Christians, as Pascal said, ought not to ask whether they felt a call to leave the world, but whether they had a vocation to stay in it.

Pascal's most appalling utterances—*e.g.*, that a sick-bed is the best place for a Christian, and that marriage is the lowest state to which he can descend—are simply logical deductions from this principle. So are his attacks on Reason, Art, the State, the other idols of unregenerate man. All this is well brought out by Koster, though perhaps he is a little too much inclined to forget that Pascal, the Jansenist ascetic, was also a disciple of Montaigne, the remorseless critic of popular conventions and shams. On the other hand, he brings out with singular clearness the unique position held by Jesus in Pascal's ethical system. Jansenist Irresistible Grace easily allied itself with the Pauline conception of the indwelling Christ. "Pascal's guide is neither the categorical imperative, nor the voice of conscience, nor the Voice of God. It is Jesus who watches, pleads, warns, comforts, punishes within him." Further, Pascal's whole conception of human nature required the presence of a Mediator, or middle term between God and man. For man is a mass of unintelligible contradictions; he is "neither a beast nor an angel," although he has both bestial and angelic elements within him. How, then, develop the angel at the expense of the beast? There is no telling, unless before humanity as it is, is set a model of humanity as it should be. Hence the importance of the "Word made flesh". The life and death of Jesus are much more than an ethical inspiration; they are a representation in detail of the purifying process, by which the bestial element in man can be wholly purged away. And the secret of that process lies in reproducing as faithfully as possible in our own soul and body the sufferings through which Jesus went. Such was the ideal which Jansenism inherited from the Middle Ages, from Thomas à Kempis and St. Francis. And, no doubt, it involves an elaborate confusion of ends with means. As Koster points out, self-renouncement, repentance, communion with God become objects in themselves, instead of mere steps towards the leading of a moral life. Still, no amount of Ritschlian sympathies can dim the pathos of Pascal's *Mystery of Jesus*. "I love poverty, because He loved it. I love goods, because they enable me to succour the needy. I keep faith with all the world. I do not return evil for evil; and I would that those who wish me harm had reached a state like mine, beyond the power of men to make or mar. I try to be true and just to all, and I feel peculiar tenderness for those to whom God has more closely bound me. In all my actions, public and private, I keep in view Him Who will one day judge them, and to Whom they are all offered up beforehand. Such are my feelings. Every day of my

life I bless my Redeemer, Who has implanted them within me. Out of a mass of malice and wretchedness, pride and ambition, He has brought forth a man freed from all these evils by the power of Grace."

ST. CYRES.

*Die dritte Dimension: Eine philosophische Erörterung.* Von A. LEVY. Bern: Scheitlin, Spring & Cie., 1908. Pp. 149.

"To establish the relation of the third dimension to Consciousness in general, and to give the former its definite position among the other factors of our consciousness"—thus the writer states the object of his inquiry (p. 7). By "the third dimension" he understands "whatever popular usage designates concrete and, in the form of sense perception, scientific research has as its subject matter" (p. 69). Beginning with consciousness in general, he finds the typical form of this in presentation (*Vorstellung*), under which head he proceeds to bring sense perception (*Empfindung*). But the general notion of presentation requires to be individualised; and this happens in the "complete life-process" where the specific presentations appear connected in thought. Connexion reduces to a time-process; time in turn "reveals itself only as change," and the latter as the "presentation of our senses". In the last analysis "time is nothing but the knowledge of our bodily parts". The deduction of the third dimension from the developed notion of time ends in the discovery that the laws of time (*Zeitgesetze*) and the laws which govern our perception of bodies are identical.

A chapter is devoted to the third dimension in mathematics, and a chapter of consequences, especially as regards the moral application, brings the book to a close.

The interest lies not so much in the ideas, which are offered with almost oracular pretensions, as in the contrast which the volume presents to the current method in Germany. Distinctions are merged with a want of conscience scarcely pardonable in an age which sees its mission once more in reiterating the oppositions of the *Kritik der reinen Vernunft*; and throughout one feels that the solution rests on a confusion rather than a genuine synthesis of ideas. Physical and spatial notions are applied to mind, and the justification, if any is given, is brought in only after the argument is complete, and even then, unconvincingly. Presentations, for example, are things which have beginnings and ends, and limit each other —in a way which suggests spatial relations. Logical connexion is identical with the temporal and causal connexion of "*Anschauungen*" and "*Empfindungen*"; and we have such statements as these: "We recognise motion in so far as we are aware of the conditions through which the existence of any body (and of course also that of any of its accidents) is constituted" (p. 82). "Between [logical ground and consequent] there subsists a time-difference. The consequent is later than the ground and presupposes it, as the verbal expression 'follows' significantly indicates" (p. 93).

A. A. B.

*Kants kritischer Idealismus als Grundlage von Erkenntnistheorie und Ethik.* Von Dr. Oscar Ewald. Berlin: Ernst Hofmann, 1908. Pp. ix, 314.

*Kants Lehre vom Schematismus der reinen Verstandesbegriffe.* Erster Teil: *Einleitung; Untersuchungen über die transcendentale Ästhetik und die Analytik der Begriffe.* Von Dr. Heinrich Levy. Halle: C. A. Kaemmerer, 1907. Pp. viii, 165. Price M.3.60.

Dr. Ewald has already, in previous volumes, expounded and criticised the philosophies of Nietzsche and Avenarius. These thinkers, however otherwise divergent in their views, agree in ascribing to thought a quite secondary *rôle*. Self-preservation is the fundamental factor in human life, and thought the merely relative instrument of its satisfaction. Nietzsche has developed the ethical, and Avenarius the epistemological, consequences of this naturalistic position. All criticism of such relativistic tendencies derives its most powerful weapons from the critical philosophy, and accordingly in this third volume Dr. Ewald seeks by sympathetic criticism to extract from Kant an answer to those metaphysical problems which the positivistic endeavours of Nietzsche and of Avenarius have made only the more pressing.

Though Dr. Ewald's volume is divided into two parts, critical and constructive, it is really critical from start to finish. The author in advancing his own constructive views strives to show that they form the only consistent outcome of the Critical standpoint and method. But as this cannot well be done in a volume of some three hundred pages, the result is far from satisfactory. The criticisms of Kant are too brief and too external to be really illuminating, and Dr. Ewald's own views are therefore left without sufficient support.

Dr. Levy's book, as it happens, covers much the same ground as the more purely critical parts of Dr. Ewald's work, and a comparison of their treatment of the central problems of the *Critique*—as, for instance, of the relation of the synthetic method of the *Critique* to the analytic method of the *Prolegomena*—serves to reinforce the profoundly unsatisfactory impression which Dr. Ewald's interpretation of Kant must leave upon the reader. The lengthy sub-title which Dr. Levy has given to his book sufficiently indicates its scope. Though somewhat diffuse and often needlessly detailed, it is a thorough and scholarly contribution to Kant literature. The promised second part will be entirely devoted to the doctrine of schematism.

Norman Smith.

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Hans Ludwig Koch, *Materie und Organismus bei Leibniz*, Halle, Max Niemeyer, 1908, pp. 59.

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# VIII.—PHILOSOPHICAL PERIODICALS.

PHILOSOPHICAL REVIEW. Vol. xvii., No. 2. **H. N. Gardiner**. 'The Problem of Truth.' [Let us agree that truth is truth of propositions; that every proposition is specific; and that its truth is relative to its intended meaning. Truth then appears as a form of ideality, which in every instance is both objective and universal. We now ask: (1) What do we mean by calling a proposition true? What is the nature of truth? A proposition is true when the idea it expresses agrees with reality. 'Idea' here stands for the whole objective immanent meaning of the proposal, that so-and-so. 'Reality' is whatever in the object of the thought or subject-matter of the inquiry must be taken account of in determining the nature of the answer, satisfactory to the intelligence, to a specific and intelligible question about it. 'Agreement' may be roughly defined by the metaphor of reflexion: truth, as related to the act of cognition, is intellectually reflected fact. We are thus led to the question (2) of the evidence of truth. And we find that the universality of truth claims acceptance not because it is a principle that works, but because it is seen to be the indispensable condition of any finally harmonious working in a world rationally ordered and socially common.] **N. Smith**. 'Subjectivism and Realism in Modern Philosophy.' [Subjectivism views ideas as standing to objects in the twofold relation of cognitive inclusion, as their apprehensions, and of mechanical exclusion, as their effects. The first view, necessary as starting-point, is invalid if the conclusion of subjectivism is correct. The way of escape is to deny that sensations are effects generated by the brain, and to make the brain the organ of our activities, not of our consciousness. Avenarius fails to establish this realistic philosophy; Bergson has given it adequate development.] **G. F. Barbour**. 'Green and Sidgwick on the Community of the Good.' [Green's argument combines the ideal of the good will as common with the Greek ideal of the good life as non-competitive. The principle of community is thus both ideal and imperative; and Sidgwick's criticisms turn on his own temperamental leaning towards empirical criteria. There is no doubt, however, that principles established in Green's way are possible and necessary; this is, indeed, implied in the claim of ethics to be a 'normative' science.] **F. Thilly**. 'Proceedings of the American Philosophical Association: the Seventh Annual Meeting, Cornell University, December 26-28, 1907.' [Reports, *inter alia*, a discussion of the meaning and criterion of truth, by W. James, J. E. Creighton, C. M. Bakewell, J. G. Hibben, C. A. Strong.] Reviews of Books. Notices of New Books. Summaries of Articles. Notes. Vol. xvii., No. 3. **F. C. Sharp**. 'The Objectivity of the Moral Judgment.' [Maintains the objectivity of the judgment of right. The term 'right' means 'demanded by my ideal of human relationships in matters of conduct, in so far as the ideal has been made self-consistent'. The common-sense belief that this ideal is universal is justified. On the side of content the ideal rejects three standards, the dysdæmonistic, the æsthetic and the antipathetic, and accepts the eudæmonistic:

this standard, in its valid form, demands an equal regard for equal amounts of well-being wherever found, and a corresponding desire to realise it so far as lies in our power.] **M. W. Calkins.** 'Self and Soul.' [Compares the self of current personalism with the traditional doctrine of soul. Logically and historically the two ideas are closely connected. Descartes and Leibniz, Locke and Berkeley, Wolff and Baumgarten were right in positing a unique, persistent, self-identical, conscious soul or self. On the other hand, the traditional notion has two defects: soul is conceived after a material analogy, or is endowed with mere negations of bodily characters; and there is a tendency to rob soul of its concrete predicates. Modern personalism starts from the self of introspection, and recognises in it the rich content of actual experience.] **W. T. Marvin.** 'The Factual.' [Any body of knowledge can be regarded as a deductive argument, and may therefore be logically analysed for the determination of its premisses. These, the primary judgments, may conceivably be axioms, factual judgments (factual being 'the content of which we are immediately aware'), or logical leaps. There can be no doubt that part of our premisses have immediate or factual warrant. The logical complexity of our actual judgments simply means that the factual judgments cannot be isolated; and the existence of these judgments does not limit the law of contradiction, since only conclusions from them can be contradictory, and this demands not new premisses but revision of inferences.] **A. Lalande** and **E. Le Roy.** 'Philosophy in France (1907).' [(1) Philosophy in the universities: account of Bergson's *L'évolution créatrice* and Hamelin's *Essai sur les éléments principaux de la représentation*. (2) Philosophy of religion: remarks on progress in church history, biblical exegesis, psychology of religion; on the attempted revival of scholasticism; and on the 'philosophy of action' of the 'modernists'.] Reviews of Books. Notices of New Books. Summaries of Articles. Notes. Vol. xvii., No. 4. **J. G. Hibben.** 'The Test of Pragmatism.' [Pragmatism is inadequate in three ways to its own test of 'whatever works is true'. (1) It is inadequate as a working hypothesis. We do not always follow the expedient, even with the qualification 'in the long run' or 'on the average': witness the constant conflicts between inclination and duty. (2) It is inadequate, because in its application we subordinate it to other considerations. The selective function of thought prior to any process of actual verification, and indeed in place of it, shows that in our thinking we recognise some other than the pragmatic standard of truth: witness the methods of trigonometry, or the significance of a table of logarithms. There is a compulsion, as well as a lead, in our thinking. (3) It is inadequate, because of the limitation of its alleged creative function. Human thought may accelerate, retard, modify, neutralise, the forces of nature, but cannot change their inherent properties; the universe, while in the making, is unfolding according to the laws and trend of its own potentialities.] **J. A. Leighton.** 'The Final Ground of Knowledge.' [The relations of the individual mind to the order of nature, and the relationships between individuals, both alike involve an over-individual thought-actuality. The ultimate subject of reference, in valid knowledge, is a universal systematic intelligence. The intuitive processes of the highest genius in science, poetry and art, processes which transcend discursive thinking, probably give us the best hints of the nature of this supreme intuitive intelligence. Hence objective idealism is the only tenable metaphysical theory.] **O. Ewald.** 'German Philosophy in 1907.' [A detailed discussion of the subject, with especial reference to the second edition of the Kuno Fischer *Festschrift* and the volume on systematic philosophy in the *Kultur der Gegenwart*. Kant is still the ideal focal point: there is

reaction against empiricism, evolutionism, psychologism, relativism, and a recognition of the eternal values of knowledge, art, religion and ethics. Moreover, while Kant vacillated between immanence and transcendence, recent philosophy (especially neo-romanticism) tends to refer these eternal values to metaphysical reality. However, the critical spirit serves as a safeguard against dogmatic and one-sided logicism.] Reviews of Books. Notices of New Books. Summaries of Articles. Notes.

PSYCHOLOGICAL REVIEW. Vol. xv., No. 1. **H. R. Marshall.** 'President's Address, American Psychological Association, Chicago. Meeting, December, 1907: The Methods of the Naturalist and Psychologist.' [On the whole, experimental psychology up to the present time has been misleading, and introspective psychology crude. We need a reform in introspective method. A suggested mode of procedure is to endow presentations with five general qualities: intensity (including vividness), manifoldness, realness, the algedonic quality and the time quality. These correspond respectively to degree of activity of the elementary nervous part, to necessary display of complexity in neururgic emphasis, to relative stability of successive neururgic patterns, to relative efficiency of elementary neural activity, and to state of specific neururgic emphasis when considered in relation to past emphases of like nature. The procedure is illustrated by reference to the laws of transformation of elemental qualities required by the systemic nature of consciousness, and to the implications of the quality of realness. Application of the method leads to the discovery of combinational senses of relation, due to coincident emphasis of two or more phases of the general qualities in connexion with a given presentation; of broadly occurring special qualities (*e.g.*, spatial quality); and thence to the treatment of specific and differentiated presentations, and of the relation of these to the non-presentable but always existent self.] Studies from the Bryn Mawr College Laboratory. **G. M. Fernald.** 'The Effect of the Brightness of Background on the Appearance of Colour Stimuli in Peripheral Vision.' [(1) Brightness of achromatic background affects range of indirect vision for O, Y and carmine; not for B, GB and V. (2) R, O and Y tend to appear R or O with light background at the points where they appear Y with the dark; B, GB, V and carmine tend to appear bluish with dark ground where they appear colourless with light; C may possibly be redder when observed on light ground. (3) Brightness of achromatic ground affects frequency and tone of after-image. (4) Duration of stimulus, from 1 to 3 sec., has little effect on appearance or frequency of image. Theoretical discussion is postponed; but the results suggest a relation to the Purkinje phenomenon in central vision.] **B. Sidis.** 'The Doctrine of Primary and Secondary Sensory Elements.—I.' [After a sketchy review of theories of perception, the writer defines the percept as an integrated whole, with nuclear and marginal elements, the former serving as cue to motor reaction and carrying affective tone. The nuclear elements are given directly by the sense-organ: the marginal are not images, but secondary sensations, "indirectly peripherally initiated". Synæsthesia is therefore the rule; a percept is an hallucination with primary nuclear elements present, an hallucination a percept with these elements absent. Abnormal is not the secondary sensation, but its dissociation.] Vol. xv., No. 2. **H. C. Stevens.** 'Peculiarities of Peripheral Vision.—I. Space Values of the Peripheral Retina.' [In general, objects seen in the right half of the monocular field of vision appear uniformly greater than objects seen in the left half; while, as compared with macular vision, objects in the right-upper half of the field are grossly overestimated, and those in the left-lower half underestimated or but slightly overestimated. Quali-

tative experiments show further that there is a connexion between this illusion and right-handedness: left-handed observers tend to see a left-hand disc, with both eyes, as larger than an objectively equal right-hand disc. The author argues that his results cannot be due to indistinctness in peripheral vision, to defective lenticular accommodation, or to defective eyesight.] **G. M. Whipple.** 'Vocabulary and Word-Building Tests.' [The determination of Kirkpatrick's vocabulary-index is influenced by a tendency to overestimation; the error may be eliminated or measured by check definition-tests. Simple word-building tests correlate fairly well with the vocabulary test; and this correlates fairly well with class standing: but the word-building test does not show the latter correlation. Sex-differences are not clear; the indications, however, are constant in direction and suggest the superiority of men and boys.] **B. Sidis.** 'The Doctrine of Primary and Secondary Sensory Elements.—II.' [Observations show that hallucinations are synthetised compounds of secondary sensory elements, dissociated completely or incompletely from their primary elements: they are thus peripheral and not central. We must indeed make a qualitative distinction between image and sensation. The latter is characterised by intensity, degrees of which are not interchangeable; the former by vividness, one degree of which may be substituted for another while the image still refers to the same sensory elements: the characteristic of the image is thus its extraordinary plasticity and possibility of substitution. Another fundamental difference is that sensations have the co-efficient of external, images that of internal reality: this agrees in the main with Baldwin's view. Calkins' distinction of community and non-community of experience must be rejected.] **E. L. Thorndike.** 'Memory for Paired Associates.' [Report of tests on the learning of German-English vocabularies, under the headings of rapidity of formation of paired associates; their permanence of retention; the relation between an individual's capacity in the one respect and in the other; the influence of practice upon the former capacity; and the individual differences in respect to memory for paired associates.]

The American Journal of Psychology. Vol. xix., No. 2. **G. S. Hall.** 'A Glance at the Phyletic Background of Genetic Psychology.' [Reviews the geological evidence for the age of the world; discusses the analogues of vital phenomena in inanimate things, and the physical and chemical principles concerned in the origin of life; reports the various views held with regard to the size of the smallest bits of living matter, and the theories of the nature and laws of the vital units of modern biology; and considers (on the whole, favourably) the question of the plant mind. Traits that are near the beginning of the line of descent of the human mind should be sought in the quest for food, in reaction to light, in thermal response, in contact reactions, in reactions to chemicals, perhaps in response to electrical stimuli, and in geotropism and changing specific gravity. We may get some inkling of the growth of mind in the evolutionary process of the world by examining the behaviour, in order, of protozoa, the fresh-water snail, *Physa*, crabs, and various insect forms. In the last three types we have not only great development of digestive, eliminative and motor apparatus, and respiratory, circulatory, reproductive, nervous and sensory mechanism and function, but also cumulative and recapitulatory heredity, and stages of somatic and psychic evolution. Incidentally, the paper discusses the criteria of mind, the mode of genesis of instinct, the value of consciousness, etc.] **E. B. Titchener.** 'The Tridimensional Theory of Feeling.' [Traces the growth of the theory in Wundt's system; estimates the four-fold evidence of emotive classification, of the results of the method of expression, of the temporal relations of

affective processes, and of their general conditions in consciousness; and seeks to come to close quarters, introspectively, with the Wundtian dimensions. Discusses the question of a multiplicity of ultimate affective qualities, in the light of Wundt's doctrine of the *Totalgefühl* and of current psychological tendency. Summarises the results of experiments by the method of impression, which tell against the tridimensional theory.] **D. Gibbs** and **O. P. Dellinger.** 'The Daily Life of *Amoeba Proteus*.' [Continuous record of the activities of the *amoeba* for six days and five nights. The animal shows distinct periods of work and rest, dependent upon the intake of food; it has food preferences, and is able to adapt itself to changes in nutritive conditions; and it is capable of 'pursuit' movements.] Minor Communications. 'Minor Studies from the Psychological Laboratory of Vassar College.' **H. M. Manro** and **M. F. Washburn.** 'The Effect of Imperceptible Lines on the Judgment of Distance.' [Negative result, confirming the observations of Titchener and Pyle.] **L. Rowe** and **M. F. Washburn.** 'The Motor Memory of the Left Hand.' [The left hand excels the right, its movements being more attentive and less automatic.] **M. Stroh, A. M. Shaw** and **M. F. Washburn.** 'A Study in Guessing.' [Experiments with subliminally whispered letters and with printed letters beyond the range of cognitive vision. Judgments may be influenced in the direction of correctness when the observer is unconscious that any influence is operative.] **R. Hoag, J. A. Lindemann** and **M. F. Washburn.** 'A Study of Errors in the Perception of Movement on the Skin.' [There is a tendency, when uncertain, to judge 'resting' or 'moved centrally'.] **J. Hicks** and **M. F. Washburn.** 'A suggestion towards a Study of the Perception of Sound Movement.' [Direction is best perceived when the moving tone comes from behind; rest is more accurately perceived than movement; downward movement is least accurately perceived.] **W. Libby.** 'The Imagination of Adolescents.' [Descriptions of pictures written by adolescent and pre-adolescent children show a very intimate connexion between imagination and the emotions. The statement that imagination is poorer in pupils of the High School than in those of lower grade depends on over-attention to the image and neglect of the affective factor.] 'Minor Studies from the Psychological Laboratory of Clark University.' **L. Ellison.** 'Children's Capacity for Abstract Thought as shown by their use of Language in the Definition of Abstract Terms.' [Definitions of twenty-seven abstract terms, written by children from eight to fifteen years of age, compared with those of university students and of dictionaries. The children's definitions are classified as those by sample, by abstract phrases (when-that-and-if clauses, infinitives, and by equivalents.] Literature. Notes.

International Journal of Ethics. Vol. xviii., No. 3, April, 1908. **J. S. Mackenzie.** 'The Problem of Moral Instruction.' [Deals with the difficulties with regard to the moral instruction of children, arising from the uncertainty of moral principles and the differences in moral ideals. The difficulties are real and fundamental, but in various ways surmountable.] **Mabel Atkinson.** 'The Struggle for Existence in Relation to Morals and Religion.' [Towards the reconciliation of the cosmic and the ethical processes through the conception of the superman.] **G. H. Mead.** 'The Philosophical Basis of Ethics.' [Statement of the implications of ethics, on the principle that the moral life lies in the interaction of moral consciousness or susceptibility and moral situation or environment.] **W. L. Cook.** 'Wars and Labor Wars.' [A comparison, showing that, in default of their abolition, there is requisite a compulsory restriction and regulation of strikes (as well as of international quarrels) in the

interests of society as a whole.] **A. C. Pigou**. 'The Ethics of Nietzsche.' [Finds the key to his teaching in the distinction between means and end. He is assumed to condemn *in themselves* things which he really condemns only as means. The nature and qualities of the superman are indeterminate, yet suffice for the man of practice by pointing him the way to his work.] **H. W. Wright**. 'Evolution and the Self-Realization Theory.' [The idea of evolution incorporated in the self-realisation theory furnishes the means, which otherwise it lacks, of combining self-interest and self-sacrifice. But the antagonism between these is not removed by the knowledge that the conflicting interests are ultimately identical: the reconciliation can be wrought out only in the hard school of moral experience.] **R. M. McConnell**. 'The Ethics of State Interference in the Domestic Relations.' [A statement of the pros and cons of State-intervention, and of its underlying principles.] Book Reviews. No. 4, July, 1908. **C. Heath**. 'The Treatment of Homicidal Criminals.' [Advocates the displacement of punishment for crime by curative treatment.] **A. H. Lloyd**. 'The Relation of Righteousness to Brute Facts.' [Refers more especially to the need of loyalty to the facts of life in our educational methods and aims. These facts constitute the *permanent possibility of righteousness*.] **J. E. McTaggart**. 'The Individualism of Value.' [Nothing has value for its own sake except conscious beings and their states. Hence value is not predicable of the universe as a whole. Corollaries from this.] **W. M. Salter**. 'Mr. Bernard Shaw as a Social Critic.' ["Ultimately, Shaw is not at all a pessimist, but rather an audacious optimist."] **G. Unwin**. 'A Note on the English Character.' [To the foreigner its central feature is hypocrisy. Explanation of this.] **W. Libby**. 'Two Fictitious Ethical Types.' [A comparison of Nietzsche's superman with that depicted in *The Two Noble Kinsmen*.] **W. J. Roberts**. 'The Racial Interpretation of History and Politics.' [Deals with its contradictions and difficulties. "The conclusion seems justified that the true philosophy of our relations to other 'races' is nothing fundamentally diverse from a democratic philosophy of the relations of individual members of the same society to each other: this is the recognition of fundamental unity and equality amid a diversity of gift and aspiration which lends to the unity completeness and character."] **F. T. Carlton**. 'Is America Morally Decadent?' [Shows that present evils had their counterparts in the past. "It is not proven that the American people are entering upon a period of moral decadence."] Book Reviews.

Revue de Philosophie. 1er Juin, 1908. **F. Cuche**. 'The Trial of the Absolute.' [The Absolute has been identified with necessary truth, with objective reality, with personal identity, with free will, with duty, and finally with God. "No one is ignorant that on the score of their being Absolutes all these concepts and their correlatives have incurred the anathemas of Monism."] **G. Aimel**. 'Individualism and the Bergsonian Philosophy.' [M. Bergson's "distinction between the deep-seated Self, where duration alone acts, and the superficial or social Self, contaminated, so to say, by spaciality". "The discovery of the notion of Duration, the key-stone of his philosophy, ranks Bergson among the great inventive philosophers." Harmony of Bergson, Höffding and James. Throughout the argument, the power of self-guidance is identified with the right, free will with independence, the root of responsibility with irresponsibility; and, finally, by a stretch of private judgment to the limit, each man's notion of his own advantage takes the place of any all-constraining truth.] **R. Turro**. 'Psychology of the Equilibrium of the Human Body.' [The continual use of muscles to keep one's balance is put down to "a sense of equilibrium, not less real than the external

senses".] **P. Duhem.** 'Absolute and Relative Movement.' [The Fifteenth Century Schoolmen on Place.] **MM. Fonsegrive, de Pascal, Gonard, de Pesloüan, Liturnski.** 'A Symposium on Democracy.' **E. Gasc.-Desfossés.** 'Analysis of E. Boutroux on Science and Religion.' 1er Juillet, 1908. **Abbé Gayraud.** 'The Old Proofs of the Existence of God.' [A defence against a Monist, M. Le Roy, of the argument of the Prime Mover and of that from Contingent Being.] **P. Cuche.** 'The Trial of the Absolute.' [Science is a function of the Absolute, that is, of the Ideal. "Any hypothesis tending to substitute a psychical factor for the universal idea must have grave consequences for the objectivity of Science." Associationism.] **A. Valensin.** 'The Theory of Experience according to Kant.' [Categories. Schematism.] **R. Turro.** 'The Psychology of the Equilibrium of the Human Body.' [Voluntary Movement, its origin: not to be confounded with Will.] 1er Août, 1908. **A. Bouyssonie.** 'Of the Reduction of the Principles of Reason to Unity.' [The impossibility of reducing the Principles of Contradiction and Sufficient Reason to the Principle of Identity.] **Abbé Gayraud.** 'The Old Proofs of the Existence of God.' [The arguments from Causation, efficient and final, and from Conscience, in reply to the Monism of M. Le Roy.] **P. Duhem.** 'Absolute and Relative Movement.—XV.' [Two fifteenth century Doctors, Paul of Venice and Cajetan of Tiena, on this difficulty: If place is determined by reference to an origin of co-ordinates, what are we to say when that origin itself is in motion, and all other assignable origins are in motion likewise?] **G. Deherme** and **C. Boucaud.** 'Symposium on the Idea of Democracy.' ["Why should not democracy take account of values? In the folly of universal suffrage we arrive, not at democracy, but at a more or less disguised plutocracy. The way to democracy is not electoral arithmetic, but a revision of social values" (G. D.). "The democratic idea overflows frontiers, and culminates logically in an international society, open to every man by the fact of his being a man" (C. B.).]

Revue Néo-Scolastique. Mai, 1908. **C. Piat.** 'The Value of Intuition in the Proof of the Divine Existence.' [An unfavourable criticism of the efforts of St. Anselm, Descartes, Leibniz, Malebranche and Fénelon, to prove the existence of God from the ideal order of possibility away from the principle of causation.] **C. Sentroul.** 'Truth in Art.' ["A work of art is properly not an imitation of things, but an expression of the creative concept of the artist, who has found in the observation and comprehension of things a serene and disinterested pleasure of contemplation. Art is then the expression of an impression; that is why it produces an impression. Art is the language of an artist, the author, to another artist, the spectator."] **D. Nys.** 'The Chemical Compound.' [Heterogeneous not homogeneous as argued by J. Greott, O.P., in last August number.] **A. Gemelli.** 'The Biological Foundation of Psychology.' ["We reject the gross error of Determinism, and refuse to admit that Physiology is Psychology."]

Zeitschrift für Psychologie. Bd. xlvii., Heft 1 und 2. **A. Aall.** 'Zur Frage der Hemmung bei der Auffassung gleicher Reize.' [If series or groups of numbers or letters are exposed for a brief period, and then at once reproduced, it is found that errors attach in far greater proportion to identical recurrent) than to heterogeneous elements. The reason is to be sought not in sensation but in cognition or apprehension, *i.e.* in the reproduction of residua of previous perceptions. Explanation falls under various heads. (1) A reproduction already effected hinders a following identical reproduction. (2) Identical is replaced by similar reproduction.

(3) The recurrent element may be casually and fleetingly cognised. The observers speak here of a 'feeling of reduplication' and of a 'feeling of inhibition'. 4 Sometimes there is a tendency to fusion among the residual images. 5 The recurrent element may be drowned out by its predecessor. 6 On the other hand, the attention may go so strongly to the reduplicated factor that the rest of the group passes with inadequate notice. (7. Lastly, error may arise through a predisposition, a tendency to judgment, on the part of the observer. On the basis of these results the author rejects Ranschburg's perceptual theory physiological inhibition and psychical fusion, and transfers the phenomena as a whole to the sphere of reproduction.] **A. Mueller.** 'Über psychophysische Wechselwirkung und das Energieprincip.' [The theory of interaction has to meet the objection arising from the principle of the conservation of energy. Three answers have been attempted: psychological, physical or physiological, and functional. The experiments of Atwater and Rubner put the two former out of court. There remain the functional views of Geyser and Becher, views which uphold the possibility of a change of direction without change of energy. The writer shows, by physical analysis, that this conception is untenable. Moreover, the functional explanation contains an inner contradiction, since a teleological connection of the physical and psychical series is already presupposed by it. So the riddle persists: we must, however, remember that the doctrine of parallelism is only partly empirical, and that the doctrine of interaction is based altogether upon metaphysical considerations.] Literaturbericht. Bd. xlvii., Heft 3. **S. Alrutz.** 'Untersuchungen über die Temperatursinne—i.' [First part of a discussion of the sensation of heat. The reaction times of paradoxical cold and of heat are approximately the same, and are about twice as long as that of warmth: this is additional evidence of the physiological duplicity of the heat sensation. The absolute limen for heat rises in direct ratio to the intrinsic temperature of the skin: the relative limen is smaller the higher the skin temperature. The relative limen also has different values for different regions of the same intrinsic temperature. The functional capacity (paradoxical) of the cold organs increases, within limits, with increase of their own temperature.] **P. Linke.** 'Meine Theorie der stroboskopischen Tauschungen und Karl Marbe.' Literaturbericht. Bd. xlvii., Heft 5 und 6. **K. Marbe.** 'Bemerkung zu dem Aufsatze des Herrn P. Linke.' [On the theory of stroboscopic phenomena.] Literaturbericht. **K. L. Schaefer,** mit Unterstützung von **H. C. Warren.** 'Bibliographie der psychophysiologischen Literatur des Jahres 1906.' [2812 titles as against 2578 for the preceding year. It is regrettable that this bibliography is so long delayed, or that (being delayed) it should not be prepared with more scrupulous care.] Bd. xlviii., Heft 1 und 2. **P. Menzerath.** 'Die Bedeutung der sprachlichen Geläufigkeit oder der formalen sprachlichen Beziehung für die Reproduktion.' Mit Schlusswort von **N. Ach.** [Association experiments, with spoken word as stimulus, undertaken to determine whether words that occur in fixed contexts and so are current in ordinary speech are peculiarly effective for reproduction: account is taken of frequency and duration of association, and of the reproductive type of the reactor. The law of Thumb and Marbe—the more current the stimulus-word, the shorter the time of reaction—is confirmed; but the graphic representation of the law is a straight line, not a curve. There are three principal reproductive types: without accompanying ideas (*A*), with such ideas (*B*), and with ideas interpolated between stimulus-word and reaction-word (*C*). *A* gives the quickest, *C* the slowest reactions. The law of currency holds for *B* and *C*, though for the latter only in inverse form: the time increases, for a given stimulus-

word, with increase of the type *C*. Current word-connexions (other than the verbs) bring out the type *A*, unfamiliar connexions *C*. The more familiar the stimulus word, the fewer are pure sound associations; and the more frequent the sound-associations, the fewer are reactions of the type *A*. In philological regard, the experiments show that the formal factors in linguistic analogy, rhyme and alliteration, are effective to establish and to maintain associations: or, as Ach puts it, that words of like sound are connected, in virtue of this likeness, without the need of 'association' in the ordinary sense.] **R. von Sterneck.** 'Das psychophysische Gesetz und der Minimal-Sehraum.' [For certain simple experimental arrangements, Weber's Law holds: here we may assume that we have found the correct mode of measuring *R*. For other, more complicated arrangements we postulate Weber's Law, and for purposes of measurement replace *R* by some $f(R)$. Where we are dealing with space and time, we have the possibility of measuring sensation in terms of a corresponding $f(R')$: thus, in experiments on visual distance, we have the true distance (stimulus) and the apparent distance (sensation). If, now, in experiments of this sort on the just noticeable difference, where all empirical factors are ruled out, we arrange the *R* in accordance with Weber's Law, we find that Meinong's interpretation of the law is valid: equal sensation-diversity corresponds to equal stimulus-diversity,—'diversity' meaning the logarithm of the ratio of two adjacent values in the system of measurement employed. This parallelism is probably of wide range.] **E. Duerr.** 'Dritter Kongress für experimentelle Psychologie (Frankfurt a/M, vom 22 bis 25 April, 1908).' Literaturbericht. **T. Flournoy, P. Ladame, E. Claparède.** 'VIme Congrès international de psychologie (Genève, 1909).'

Archiv für die gesamte Psychologie. Bd. x., Heft 3 und 4. **F. Rose.** 'Johann Georg Sulzer als Ästhetiker und sein Verhältnis zu der ästhetischen Theorie und Kritik der Schweizer.' [Bodmer and Breitinger had outlined in 1727 the plan of a systematic poetics; had the plan been realised, Baumgarten would have been anticipated, and æsthetics would have had a different history. In fact, however, the nearest approach to realisation is to be found in Sulzer's *Allgemeine Theorie der schönen Künste*, which was not published until 1771-1774 (although Sulzer declared himself satisfied with his theory in 1764), and which therefore postdated Lessing's *Laokoon* (1766), *Dramaturgie* (1767-1769) and *Emilia* (1772), and Goethe's *Götz* (1773). Sulzer had no sympathy with the new movement; and his lexicon, though much used, was from the first regarded as out of date, and contemptuously criticised. The writer finds that, in general, Sulzer's place in the history of æsthetics is merely that of an "ehrbaren Handwerksmeister, der nicht ganz ohne Verdienst war," though his independence and originality, especially in the field of psychology, are greater than is ordinarily recognised.] **Frl. von Renauld.** 'Ueber reflexive Sympathie, mit besonderer Berücksichtigung der Verpflichtungsfrage.' [The problem of human relations ("der Beziehungen der Menschen untereinander") can be solved only if we divide the life of man into two periods, dominated respectively by instinct and reason. It has been variously treated in the history of philosophy; Hume is the first to attempt a solution in terms of reflex sympathy ("the minds of men are mirrors to one another"). We attain to consciousness of the existence of beings analogous to ourselves by way of empathy, which is based mainly upon the impulse to imitation; we communicate and understand ideas by the gradual growth of the speech-function. But communication may be of three kinds; of thoughts (judgments, concepts), of will, and of desire. The writer is concerned especi-

ally with the second mode of communication, the psychology of which she works out (on a plan of analysis suggested by her distinction of instinct and reason) under the rubrics of simple communication of will, and communication of will for a determinate purpose (command and interdict; ordinary and solemn promise; contract).] **F. Kiesow.** 'Über einige Berührungstauschungen.' [If a pressure spot is touched, and the observer has to localise the impression by another touch, the illusion often arises that the first or stimulus-touch was given by the observer himself. The illusion also occurs, within certain limits, for impressions of tickle, warmth, cold, pain. It is due to associative factors in the experience.] **L. J. Martin.** 'Zur Begründung und Anwendung der Suggestionsmethode in der Normalpsychologie. Vorläufige Mitteilung.' [A careful study of the value of the hypnotic method in experimental psychology, preliminary to a discussion of Fechner's æsthetic principle of the *Aussetzung von Lust und Unlust*. After describing the observers and the mode of their hypnotisation, the writer reports experiments upon rapport and amnesia, anæsthesia, voluntary and involuntary movements, memory, imagination, feeling, etc., etc. She concludes that the method is valuable for mental analysis, for isolation and differentiation. General results are: (1) the hypnotic state must always be used in connexion with the normal; (2) great attention must be paid to individual differences; (3) it is not permissible to argue from one sense to another, or even from one area of a field of sense to another; (4) hypnosis must be considered as a state of extreme lability; (5) everything depends upon the training, reliability and confidence of the observers.] **R. Levi.** 'Zur Analyse der Empfindungen, insbesondere der Lustempfindung.' [A series of forty propositions, in which the author sets forth his view that the sensation of pleasure is a complex process, containing (*a*) a pleasure component, itself compounded of specific stimulus-element and secondary or reactive pleasure-element, and (*b*) a pain-component.] **A. Messer.** 'Bemerkungen zu meinen "Experimentell-psychologischen Untersuchungen über das Denken".' [Reply to criticisms of Meumann and Bühler.] Literaturbericht. Einzelbesprechungen. [Meumann on Wundt's essay *Über Ausfragexperimente*.] Referate. Bd. xi., Heft 1. **G. Stoerring.** 'Experimentelle Untersuchungen über einfache Schlussprozesse.' [Experiments by the *Ausfragemethode* upon simple categorical syllogistic reasoning. Letters were visually exposed, as *e.g.* in the form: "*T* is to the left of *B*; *K* is to the left of *T*; therefore . . ." The time of inference was recorded, and the instruction was varied with a view to the fractionation of the introspections. Under the heading of spatial relations, the author finds four modes of inferential operation: a simple 'reading off' of the conclusion; an apprehension of the two not-*M* terms as lying in different directions; and a twofold apprehension of the three terms as lying in the same direction (passage from *M* to a not-*M*, or from a not-*M* to *M*, with conclusion to the position of the other not-*M*; or apprehension of the position of the remoter not-*M*). These and similar operations are then determined for temporal relations, relations of magnitude (larger, smaller, equal) and relations of subsumption. The results are reported in great detail, and no summary is appended to the paper.] **A. Kirschmann** und **D. S. Dix.** 'Experimentelle Untersuchung der Komplementärverhaltnisse gebräuchlicher Pigmentfarben.' [A careful determination of the complementarism of the Milton-Bradley hues, tints, shades, Rothe and Prang (standard educational) coloured papers, and of a number of water-colour pigments. The writers do not state the nature of their control papers (black and white).] Bd. xi., Heft 2. **F. E. O. Schultze.** 'Einige Hauptgesichtspunkte der Beschreibung in der Elementarpsychologie.

III. Über Organempfindungen und Körpergefühle (Dynamien).' [An attempt at a descriptive psychology of what the author terms 'Icherscheinungen,' *i.e.*, organic sensations and the bodily feelings connected with them. After a note on difficulties of observation, the organic sensations are classified as cutaneous, subcutaneous, articular and pain; in the experiences recorded they were by no means obtrusive or regular in their occurrence; and the writer insists that they have nothing to do with an ultimate psychological theory of attention or volition. Their course is traced in experiences of attention and expectation; in the consciousness of direction; in effort and 'gliding' (*Schweben*); and in the feelings of relaxation and of sudden disappointment or shock. The tactual-motor group yields eight 'dynamic' types, which we may characterise as those of calm seriousness, power, ease and freshness, dulness and fatigue, interest and excitement, surprise and relaxation, effort, movement. Observation is often unable to decide whether these dynamic contents are given as sensation or as image ('frisch' or 'verblasen'). The occurrence of extra-bodily localisation serves to bring them into line with sensations in general. Feeling may be distinguished from organic sensation not by quality, or reproductive behaviour, or dependence, or impossibility of localisation, or nearness to the self, but only as laying claim, so to say, to the whole mind at once.] **W. Schallmayer.** 'Zur Abwehr.' **A. Vierkandt.** 'Erwiderung auf die vorstehende Abwehr.' Literaturbericht. Einzelbesprechung. [Bühler on Stumpf's *Erscheinungen und psychische Funktionen*.] Referate. Bd. xi., Heft 3 und 4. **E. Lucka.** 'Das Problem einer Charakterologie.' [The problem of characterology is not to pigeon-hole the results of a string of mental tests. It must deal with the individual mind as a functional whole; character is "the disposition of an individual psychical organisation to receive the impressions of the world about it and to react upon them in a determinate fashion"; and the science of character thus occupies a middle place between psychology and the philosophy of values. Its method is "die Methode des seelischen Verständnisses": and if this method has the defects that it depends upon a special gift and cannot achieve exactness, it has the merit that it is adequate to the material and aims of characterology. If we attempt a programme of the science, we have first a horizontal division of human characters as naïve and reflective or 'mediate'; and secondly a vertical scale, which rises from the 'man of the moment,' the purely reproductive type, to the productive, creative, original type—a scale whose extremes are receptivity or learning, and spontaneity or 'Erleben'. Personality is precisely the "Kraft des Erlebnisses," the power of forming the unformed and transforming the formed experience: it is thus a narrower term than character, while it appears as the manifestation of the "charakterologische Grundfunktion". The conscious contents which are produced by the 'Erlebniskraft' are of three kinds: creative (founders of religions), concrete (artists), and theoretical (philosophers).] **I. A. Gheorgov.** 'Ein Beitrag zur grammatischen Entwicklung der Kindersprache.' [Record of the linguistic development (Bulgarian) of the writer's two sons.] **C. Ernst.** 'Hielt Descartes die Tiere für bewusstlos?' [Descartes was certain that the existence of an animal mind could not be proved, but he granted that its non-existence was also beyond the reach of proof. In weighing the probabilities, however, he made no secret of his own conviction that animals are mindless.] **W. Wundt.** 'Kritische Nachlese zur Ausfragemethode.' [Reply to Bühler.] **T. Flournoy, P. Ladame, E. Claparède.** 'VI^me^ Congrès internat. de Psychologie (Genève, 1907).' Literaturbericht. **F. M. Urban.** 'Die Psychologie in Amerika. II.—Psychophysische Massmethoden.' Einzelbesprechung. [A. Kowalewski

on G. Störring, *Ethische Grundfragen.*] Referate. Bd. xii., Heft 1 bis 3. Arbeiten aus dem psychologischen Institut der Universität Würzburg. **K. Bühler.** 'Tatsachen und Probleme zu einer Psychologie der Denkvorgänge. II.—Ueber Gedankenzusammenhänge.' [In any course of thought we experience, besides the thoughts themselves, a 'zwischengedankliches Wissen'. This knowledge may be of two kinds. It may consist of conscious relations to the problem, to preceding problems, to another thought of the series, to a thought outside the series, to critical standards, etc.: in all these cases the relations attach to thought not as content but as *Erlebnis*, and may therefore be named functional interrelations (*Zwischenerlebnisbeziehungen*). Or the knowledge may consist of conscious relations between thought-contents: these are the logical relations, and may be termed objective interrelations (*Zwischengegenstandsbeziehungen*). Conscious grammatical relations appear to hold a middle place. A special type of objective interrelation is found in the apprehension of thought (understanding of sentences).] 'III.—Über Gedankenerinnerungen.' [A study of thought-recollection, or of the influence exerted upon present by past thinking. The experimental method was fourfold. (1) Descriptive titles of objects, or characterisations of concepts in noun-form, are read in pairs: thought-memory is later tested by the Müller-Pilzecker method of right associates. (2) A sentence is read; later, after the reading of a number of other sentences, comes a second sentence which requires the first as its thought-complement: the observer has to describe whether and how the thought of the first sentence is reproduced. (3) Two series of proverbs are read: the observer has to say whether a given member of the second series reminds him of anything similar in the first. (4) A series of sentences is read: then a catch-word is given, and the memory which it evokes is described. The author names these procedures the methods of thought-pairs, of completion, of analogy, and of catch-words. His results are grouped under three headings. (1) The starting-point of the recollection may be thought or feeling or idea, or again a part or moment of a thought. There is no 'besonderer Erlebnischarakter' which fits a content to start a recollection; the problem lies farther back, in the 'Richtung des Gedankenfortschritts'. (2) Recollection may be of two kinds: mechanical or iterative (association of thoughts), and conscious or ideal. Ideal recollection does not involve a re-living of the earlier experience; in it, knowledge about the final term (consciousness of similarity, contrast, etc.) may be primary, and knowledge about the relation of final to first term only indirect and secondary; and there is a more or less definite localisation of the final term. (3) The process of recollection itself, the discovery of the verbal formula, evinces two distinct types; the thought may come later than the words, or the thought may be ready and the words for it may have to be sought.] 'Nachtrag. Antwort auf die von W. Wundt erhobenen Einwände gegen die Methode der Selbstbeobachtung an experimentell erzeugten Erlebnissen.' [Reply to Wundt's critique of the *Ausfragemethode*: Wundt's rejoinder appears in the later published vol. xi., Heft 3 4. In temper and in logic Wundt seems to have the better of it; what will be the issue of the clash of psychologies—whether the elaborate thought-psychology of the Würzburg school will stand the test of time and further experiment—can hardly be predicted.] **J. Segal.** 'Über den Reproduktionstypus und das Reproduzieren von Vorstellungen.' [Determination of reproductive type must be based neither upon the prevalence of a certain modality of ideas in consciousness, nor upon differences (interindividual or intraindividual) in the vividness of ideas, but rather in the relation of reproduction to the manifold data of perception. The author works with letters (three-

fold possibility of reproduction), tonal material and movements (twofold possibility), words of concrete character, and (for vividness of ideas) geometrical figures and colours. He explains reproductive type "durch die stärkere Perseverationstendenz, welche die den Typus bedingende psychophysische Disposition auszeichnet". The fact that an observer belongs to a certain type is a matter of ideational dynamics only; it does not permit of inference with regard to any further peculiarities of ideation (*e.g.*, intensity of ideas).] **L. W. Legowski.** 'Beiträge zur experimentellen Æsthetik.' [Report of experiments with lines, geometrical outlines, and coloured and uncoloured figures, undertaken in the interests of methodology and of the 'direct' factor in the æsthetic judgment. The methods used were the serial method, the method of paired comparisons, the method of adjustment, and a form of the method of choice (serial method) with hand-reaction. The author finds that the direct factor plays an important part in the æsthetic attitude: under experimental conditions, it may be the sole condition of æsthetic pleasure; and in the arts it is shown in the effort after arrangement, symmetry, proportion. Like the relative factor, it may be a compromise of several different motives. The serial method has the advantage of utilising the entire æsthetic material; the method of paired comparisons demands elimination of the space-error and an equal distribution of attention. Other conclusions are: that the pleasure of symmetry depends on the regularity of the impression; that Puffer's 'hidden' symmetry is really an overt symmetry, since the observers reconstruct the figure in idea; that the elements and laws of æsthetic effect are genuinely given under laboratory conditions, so that argument to actual works of art is permissible; and that æsthetic acceptance and rejection are not identifiable outright with pleasantness-unpleasantness.] **J. Laub.** 'Über das Verhältnis der ebenmerklichen zu den übermerklichen Unterschieden auf dem Gebiet der optischen Raumwahrnehmung.' [In 1900 Ament published from the Würzburg laboratory experiments on visual and auditory intensity, which seemed to show that the just noticeable difference increases with the absolute value of the stimulus. The results were, however, not unequivocal; they were not accepted by Ebbinghaus, Lehmann and Titchener; and they were not confirmed by experiments undertaken in Müller's laboratory. Müller insisted, further, on the necessity of concomitant introspective analysis. The present writer repeats and extends Ament's experiments, in the sphere of visual space perception. He reports (1) comparative work with circular surfaces judged as surfaces; (2) control experiments (two circles given, and the third estimated); (3) comparative work with circular surfaces whose vertical diameters were the object of judgment; and (4) control experiments (three circles given, and the fourth estimated). Attention is also paid to the mode of judgment, and various types are distinguished (judgment by differences, by ratios, by degree of cohesion). In general, the conclusion of Ament for intensity and of Wrinch for time-intervals is confirmed; the just noticeable difference is not a constant. This result is independent of the mode of judgment, and therefore appears to indicate a true quantitative comparison of sensations (against Müller and Lipps).] **A. A. Grünbaum.** 'Ueber die Abstraktion der Gleichheit. Ein Beitrag zur Psychologie der Relation.' [Paired groups of simple but unfamiliar visual figures, 2 to 6 in number, are exposed for three seconds, one element being common to both groups; the observer has the task of determining the common element 'abstraction of likeness' or of 'identity'). The process of observation is described in detail. (1) Within the total predisposition (*Einstellung*), three moments are distinguishable: the givenness of the problem, the conscious aiming at

means or end, and aids of various kinds. The interrelation of these moments, together with the observer's peculiar method of work, determines his total achievement. (2) The problem set is solved in no less than eight different ways, dependent upon objective (time, number) and subjective (tension, concentration) factors. (3) The principal task is the apprehension of likeness (as identity or similarity). The numerical results accord with the experimentally established laws of memory and reproduction. (4) The observer has also a secondary task: that of the reproduction or recognition of the unlike figures. (This combination of principal with secondary task is of great methodological importance: it may, as the author suggests, prove to be of service in connexion with the measurement of attention.) It is found that concentration upon the principal task assists in the performance of the secondary,—an unexpected result, in view of the current doctrine of the range of consciousness. On the other hand, the secondary task suffers by accentuation of the like elements, and by accomplishment of the principal task. (5) The like figures have an especial clearness, even before their likeness is recognised. (6) As this apperceptive accentuation is independent of the apprehension of likeness, so is the apprehension itself an independent act, not necessarily or unequivocally connected with apperception. (7) The effect of the initial statement of the general problem is to consolidate predisposition, to equalise or compensate the processes concerned in abstraction, to prolong and to deepen the after-effects, and to narrow and inhibit the course of intruding ideas. The paper ends with appendices, reporting hypnotic experiments and control experiments upon the 'strikingness' of the figures, and with a programme of further work.] 'Gesellschaft für experimentelle Psychologie.' [Programme of the third Congress.] Bd. xii., Heft 4. **E. Reinhard.** 'Der Ausdruck von Lust und Unlust in der Lyrik.' [In lyric poetry, the feelings of pleasantness and unpleasantness are objectified, so to say, in condensed form. It should, therefore, be possible to distinguish their expressions. To this end the author analyses forty poems by Goethe, Chamisso and Lenau, divided as evenly as the material allows into joyful and sorrowful, and closely comparable in contents. The poems were read aloud by the various observers with the endeavour to reproduce as closely as might be the intention of the author. The result is clear and definite: unpleasant feeling is expressed by a lowering of the pitch of the voice, a slowing of the tempo in reading, and a staccato utterance: and, on the objective side, by a relative lengthening of the duration of syllables and the preponderance of certain vowel sounds. Variation in the melody of speech (relative magnitude of intervals) is correlated, not with pleasantness-unpleasantness, but with excitement-calm. There is an interesting excursus on the 'quality of voice' instinctively connected with the reading of the works of a given poet: the author parallels it by the analogy of vocal music.] **O. Klemm.** 'Bericht über den dritten Kongress der Gesellschaft für experimentelle Psychologie in Frankfurt a. M. vom 22. bis 25 April, 1908.' **H. Vaihinger.** 'Drittes Preisausschreiben der "Kantgesellschaft". Carl Güttler-Preisaufgabe.' Literaturbericht.

Rivista Filosofica. Anno x., vol. xi. Fasc. iii. May-June-July, 1908. **S. Tedeschi.** 'Un' equivalente aprioristica della metafisica (la teoria degli oggetti).' [A lucid but rather too summary account of Meinong's theory of objects.] **A. Levi.** 'La psicologia della esperienza indifferenziata di James Ward continuazione e fine.' [According to this critic Dr. Ward's system exhibits 'a harmony of outline, a continuity of method, and a coherence of evolution perhaps not to be found in any other psychological theory'. But the problems of psychology are not

distinguished with sufficient clearness from those of epistemology; and in this respect Ward is much inferior to Wundt. Ward, James and Bergson are animated by a common hostility to the associationist psychology, which they have shown to be based on an illogical assumption. But the theory of undifferentiated experience is an unproved hypothesis, and gives us two logical absurdities for one. The first is the self-contradictory notion of unconscious mentality; the second is the simultaneous distribution of consciousness over a series of different planes, which violates the principle of identity. As a working hypothesis, too, associationism is much easier and more useful than that of undifferentiated experience gradually organised by the agency of attention.] **A. Tilgher.** 'Bramanesimo, Buddismo e Cristianesimo (continuazione e fine).' [Christianity has shown a power of reconciling the infinite with the finite not possessed by Brahmanism and still less by Buddhism, from the competition of which latter it has nothing to fear in the West.] **A. Faggi.** 'Eduardo Zeller e la sua concezione storica.' [Zeller with all his greatness could never quite rise to the method of co-ordinating the evolution of philosophy with the other manifestations of national culture.] **L. M. Billia.** 'Le idee morali nella dottrina di un psicologo scandinavo.' [In praise of K. B. R. Aars.] **P. F. Nicoli.** 'Il metodo delle matematiche e l' insegnamento elementare della logica.' [If teachers of philosophy were better acquainted with the history of mathematics they would know better than to describe it as a type of pure deductive reasoning.] **L. Miranda.** 'Mach o Hegel.' [According to Mach, the logical processes are no more than artificial instruments of investigation. According to Hegel, they are immanent in the nature of things. The latter view is the true one.] **Rassegna** Bibliografice, etc.

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